



**REHABILITATION OF CENTRAL AVENUE AND STORM DRAIN;  
PHASE II ENVIRONMENTAL SITE ASSESSMENT**



**DECEMBER 2013**

**WR&A**

Whitman, Requardt & Associates, LLF



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## **Executive Summary**

The City of Baltimore Department of Transportation (DOT) is currently reconstructing Central Avenue from just north of Madison Street to Lancaster Street within the City of Baltimore, Maryland. The Central Avenue project's total length is over 6,000 feet and the reconstruction will be completed under two (2) phases. Phase One construction activities, between Madison Street and Baltimore Street (approximately 2,700 feet), are currently underway. Phase Two construction activities will continue from Baltimore Street to Lancaster Street (approximately 3,300 feet). Phase Two includes the replacement of two bridges located at the intersections with Aliceanna and Fleet Streets. Construction will include grading, paving, installation of sidewalk and curb, underground utility replacement as needed, landscaping, as well as the rehabilitation of the Harford Run storm drain. The City of Baltimore DOT requested Whitman, Requardt and Associates, LLP (WR&A) to conduct a Limited Phase II Environmental Site Assessment (ESA) to characterize subsurface conditions for the Phase Two corridor.

WR&A commenced fieldwork in July 2013. WR&A collected a total of 21 soil samples from seven boring locations. According to the analytical data from the subsurface soil sampling, one metal, arsenic, was reported at a concentration that exceeded the Maryland Department of the Environment (MDE) Non-Residential Cleanup Standards for soil. WR&A also collected groundwater samples at these seven boring locations. Analytical data for the groundwater sampling indicate that six of the seven boring locations reported concentrations of total petroleum hydrocarbons-diesel range organics (TPH-DRO) that exceeded the MDE Groundwater Standards for Type I and II Aquifers. One volatile organic compound (VOC), tetrachloroethene, was detected in a groundwater sample collected from one boring location at a concentration exceeding the MDE Groundwater Standard. Additionally, lead was detected in two groundwater samples collected from two boring locations for total metals (unfiltered) at a concentration exceeding the MDE Groundwater Standard, however; concentrations for dissolved metals (filtered) were below the MDE Groundwater standard.

This Phase II ESA has revealed evidence that the soil and groundwater located within the subsurface of the project site has been adversely impacted. Petroleum and arsenic represent the most consistent contaminants found within the study area. Petroleum, specifically TPH-DRO, was detected in groundwater, and arsenic was detected in soil at concentrations which exceed their respective standards throughout the study area. Although detected arsenic concentrations exceed the MDE Non-Residential Cleanup Standard for soil, the concentrations reported in all of the soil samples collected are within the Anticipated Typical Concentrations (ATC) values established by the United States Geological Survey (USGS) for the eastern and central regions of Maryland. Furthermore, a soil sample collected during the July 2012 geotechnical drilling efforts, at the intersection of Aliceanna Street and Central Avenue, identified TPH-DRO contaminated soil. No other soil samples collected within the study area indicated TPH-DRO concentrations above the MDE Non-Residential Cleanup Standards; however, analytical results for two soil samples collected at the intersections of Fleet Street and Central Avenue and



Aliceanna Street and Central Avenue reported concentrations of TPH-DRO above levels the MDE Oil Control Program (OCP) guidance for soil reuse.

Construction efforts will likely encounter isolated pockets of contamination during soil excavation and will require appropriate handling and management procedures. During construction activities, areas where contamination is encountered and are determined to exceed regulatory standards, modified construction methods, segregation of contaminated materials and on-site treatment and/or off-site disposal of contaminated materials may be required.

The anticipated exposure routes that are associated with construction efforts include dermal contact, ingestion or inhalation. Construction workers will be at greater risk for exposure to contaminants than the general public because of the proximity to freshly excavated materials, open excavations and dewatering effluent.



## Introduction

The City of Baltimore Department of Transportation (DOT) is currently reconstructing Central Avenue from just north of Madison Street to Lancaster Street within the City of Baltimore, Maryland. The Central Avenue project's total length is over 6,000 feet and the reconstruction will be completed under two (2) phases. Phase One construction activities, between Madison Street and Baltimore Street (approximately 2,700 feet), are currently underway. Phase Two construction activities will continue from Baltimore Street to Lancaster Street (approximately 3,300 feet). Phase Two includes the replacement of two bridges located at the intersections with Aliceanna and Fleet Streets. Construction will include grading, paving, installation of sidewalk and curb, underground utility replacement as needed, landscaping, as well as the rehabilitation of the Harford Run storm drain.

The City of Baltimore DOT requested Whitman, Requardt and Associates, LLP (WR&A) to conduct a Limited Phase II Environmental Site Assessment (ESA) to characterize subsurface conditions for Phase Two. A site vicinity map of the study area is included in **Appendix A** as *Figure 1*. WR&A commenced fieldwork in July 2013.

## Previous Investigations

A Phase I ESA dated September 2012 identified numerous recognized environmental concerns (RECs) along the project area which included auto repair facilities, underground storage tanks (USTs), hazardous waste generating facilities, and both historic and current industrial operations within or immediately surrounding the project site. During the geotechnical drilling activities for the reconstruction of Central Avenue in July 2012, petroleum impacted soil was encountered at soil boring BA-3, located at the southwestern corner of the intersection of Aliceanna Street and Central Avenue. Analytical results for the collected soil sample reported concentrations of total petroleum hydrocarbons-diesel range organics (TPH-DRO) that exceeded the clean-up standards set by Maryland Department of the Environment (MDE) for non-residential use soil (620 mg/kg).

In September 2012, WR&A conducted a Limited Phase II ESA to delineate the contaminated area around the BA-3 soil boring location. A total of four soil samples and four groundwater samples were collected in the vicinity of soil boring BA-3. According to the analytical data from the subsurface soil samples, arsenic was detected all four boring locations at concentrations that exceeded the MDE Non-Residential Clean-up Standards for soil. Analytical data from the subsurface groundwater samples also reported concentrations of TPH-DRO and metals that exceeded the MDE Groundwater Standards for Type I and II Aquifers. However, it should be noted that these groundwater samples were collected with a bailer and temporary wells were not installed so it was not possible to perform groundwater development or purging using low-flow sampling methods (peristaltic pump). This type of sampling can produce altered or elevated results for certain parameters, including metals, due to the potential for high turbidity (suspended



solids), aeration and sample agitation. Furthermore, no groundwater was tested for dissolved metals during this investigation.

## Subsurface Investigation

Eleven (11) soil boring locations were originally proposed to characterize subsurface material within the Phase Two project area. These soil boring locations were selected based on their proximity to identified RECs and as general representative locations to characterize remaining areas within the Phase Two alignment. Unmarked existing utilities prevented four soil borings from being installed. Boring Location Maps are included in **Appendix A** as *Figure 2a* and *Figure 2b*.

### Soil Sampling

Seven soil borings were installed by E2CR, Inc. using a truck-mounted Diedrich D-50 drill rig. Soil borings were installed to a depth of 20 feet below ground surface (BGS). This depth was determined to provide adequate coverage for the maximum anticipated excavation depth during upcoming construction efforts. Hollow-stem augers were used to collect 24-inch split-spoon soil samples; continuous split-spoon sampling was conducted from the just below the surficial asphalt and gravel base to the terminus of the boring. Soil was removed from the split-spoon and was transferred to zip-sealing bags and allowed time to volatilize. Split-spoons were cleaned using an Alconox/water solution and disposable nitrile gloves were switched out between sample intervals to prevent cross-contamination. Hollow-stem augers were switched out between borings and were decontaminated before reuse.

WR&A classified soil in accordance with the Unified Soil Classification System and all soils were screened for volatile organic compounds (VOCs) using a photo-ionization detector (PID). Due to the negligible PID readings, grab soil samples were collected from the vadose-zone (the area just above the soil/groundwater interface). Additionally, two composite samples were collected from each boring for pollutant priority metals (one from 2 to 10 feet BGS and one from 10 to 20 feet BGS). Boring logs, soil descriptions and PID measurements are included in **Appendix B**. Soil samples were immediately placed in a cooler on ice following collection and were submitted under standard chain-of-custody procedures to Phase Separation Science in Baltimore, Maryland for analytical testing for parameters listed below.

### Soil Analytical Parameters

- Total Petroleum Hydrocarbons-Diesel Range Organics (TPH-DRO)—EPA test method 8015B
- Total Petroleum Hydrocarbons-Gasoline Range Organics (TPH-GRO)—EPA test method 8015B
- Volatile Organic Compounds (VOCs) plus Oxygenate—EPA test method 8260B
- Semi-Volatile Organic Compounds (SVOCs)—EPA test method 8270D



- Pollutant Priority List Metals (PPL Metals)—EPA test method 6020B

### **Groundwater Sampling**

A temporary two-inch diameter piezometer was placed into each boring location and was allowed to equilibrate overnight. Low-flow methodology, using a peristaltic pump, was selected to collect in situ groundwater samples in order to obtain better qualitative data for metals in groundwater. The peristaltic pump was used to purge the groundwater and collect groundwater samples. Associated polyurethane and silicone tubing was switched out between sample locations to prevent cross-contamination. No free-phase petroleum product was observed during groundwater sampling activities. Purge water was filtered through a small quantity activated carbon bed in accordance with *MDE Maryland Environmental Assessment Technology for Leaking Underground Storage Tanks (Revised February 2003)* prior to discharge. Upon completion of the purging and groundwater sampling activities, groundwater samples were immediately placed in a cooler on ice and were submitted under standard chain-of-custody procedures to Phase Separation Science in Baltimore, Maryland for analytical testing for the parameters listed below.

### **Groundwater Analytical Parameters**

- Total Petroleum Hydrocarbons—Diesel Range Organics (TPH-DRO)—EPA test method 8015B
- Total Petroleum Hydrocarbons—Gasoline Range Organics (TPH-GRO)—EPA test method 8015B
- Volatile Organic Compounds (VOCs) plus Oxygenates—EPA test method 8260B
- Semi-Volatile Organic Compounds (SVOCs)—EPA test method 8270C
- Pollutant Priority List Metals (PPL Metals) Total and Dissolved —EPA test method 6020

Following groundwater sample collection, soil borings were backfilled using portland cement and asphalt patch.

## **Analytical Data Results**

### **Soil**

All detected concentrations were compared to the MDE Non-Residential Clean-up Soil Standards. Analytical results for detected compounds in soil are summarized in **Table 1**.

### ***Metals***

Arsenic was detected in all seven boring locations: CAESB-2, CAESB-3, CAESB-5A, CAESB-6, CAESB-7 CAESB-9 and CAESB-11. Arsenic was reported at levels exceeding the MDE Non-Residential Cleanup Standard for soil in all samples collected from depths of 2-10 feet BGS and in four samples collected from depths of 10-20 feet BGS.

**Table 1: Soil Analytical Data Results**

Table 1: Soil																			CAESB-11		
Sample			CAESB-2			CAESB-3			CAESB-5A			CAESB-6			CAESB-7			CAESB-9			
Depth			8-10'	2-10'	10-20'	8-10'	2-10'	10-20'	6-8'	2-10'	10-20'	8-10'	2-10'	10-20'	6-8'	2-10'	10-20'	6-8'	2-10'	10-20'	
Analyte / Test Method	MDE Non-Residential Cleanup Standard	Units	Grab	Composite	Grab	Composite	Grab	Composite	Grab	Composite	Grab	Composite	Grab	Composite	Grab	Composite	Grab	Composite	Grab	Composite	
TPH-DRO /8015C	620	mg/kg	ND	NS	NS	ND	NS	NS	ND	NS	NS	9	NS	NS	ND	NS	NS	71	NS	NS	
TPH-GRO / 8015C	0.62	ug/kg	ND	NS	NS	ND	NS	NS	ND	NS	NS	ND	NS	NS	ND	NS	NS	ND	NS	NS	
VOCs / 8260B Acetone	92,000,000	ug/kg	ND	NS	NS	ND	NS	NS	ND	NS	NS	22	NS	NS	40	NS	NS	34	NS	NS	
SVOCs / 8270C bis(2-ethylhexyl) phthalate	200,000	ug/kg	ND	NS	NS	220	ND	NS	ND	NS	NS	ND	NS	NS	ND	NS	NS	ND	NS	NS	
Metals / 6020A																					
Arsenic	1.9	mg/kg	NS	<b>4.5</b>	<b>3.4</b>	NS	<b>2.4</b>	1.2	NS	<b>2.7</b>	0.67	NS	<b>3.4</b>	<b>2.0</b>	NS	<b>3.4</b>	1.1	NS	<b>2.7</b>	<b>2.4</b>	NS
Chromium	310	mg/kg	NS	22	33	NS	43	80	NS	34	16	NS	18	25	NS	25	16	NS	28	28	NS
Copper	4,100	mg/kg	NS	18	23	NS	12	32	NS	14	5.6	NS	16	11	NS	12	5.7	NS	15	10	NS
Lead	1,000	mg/kg	NS	50	77	NS	4.9	10	NS	19	2.6	NS	87	8.2	NS	15	4.7	NS	260	30	NS
Mercury	31	mg/kg	NS	0.25	0.42	NS	ND	ND	NS	ND	ND	NS	0.19	ND	NS	0.11	ND	NS	0.26	ND	NS
Nickel	2,000	mg/kg	NS	12	17	NS	17	41	NS	15	5.3	NS	5.8	9.7	NS	11	7.1	NS	10	17	NS
Zinc	31,000	mg/kg	NS	27	34	NS	36	71	NS	32	26	NS	17	20	NS	24	12	NS	34	25	NS
ND: Non Detect			<b>Bolded</b> values indicate exceedance of soil standard																		
NS: Not Sampled																					



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## **Groundwater**

All detected concentrations were compared to MDE Groundwater Standards for Type I and II Aquifers. Analytical results for detected compounds in groundwater are summarized below in **Table 2**.

### *Total Petroleum Hydrocarbons (TPH)*

Reported concentrations of TPH-DRO exceeded the MDE Groundwater Standards of 0.047 mg/L in groundwater samples collected from six of the seven borings (CAESB-2, CAESB-3, CAESB-5A, CAESB-6, CAESB-7 and CAESB-9) ranging from 0.11 mg/L to 0.17 mg/L.

### *Volatile Organic Compounds (VOCs)*

A reported concentration of tetrachloroethene (7.8 ug/L) exceeded the MDE Groundwater Standard (5 ug/L) in the groundwater sample collected from boring CAESB-7.

### *Total Metals (Unfiltered)*

Lead was reported at concentrations that exceeded the MDE standard of 15 ug/L in groundwater samples collected from two borings (CAESB-5A: 18 ug/L and CAESB-6: 34 ug/L). Lead was detected in all remaining groundwater samples collected but reported concentrations were below the MDE Groundwater Standards for Type I and II Aquifers.

Laboratory reports for both soil and groundwater are included as **Appendix C**.

## **Conclusion**

The purpose of this Phase II ESA is to evaluate and assess potential risks associated with subsurface materials that may be encountered during the Phase Two construction activities for Central Avenue. Construction activities including soil excavation and groundwater dewatering will need to be performed within areas where contaminants have been identified in the soil and/or groundwater. In order to protect workers, the public and the environment, appropriate management and disposal of contaminated subsurface materials will need to comply with regulatory requirements. Seven borings were installed throughout the study area to a depth of 20 feet BGS. Both soil and groundwater samples were collected and lab-tested in order to characterize subsurface materials. Analytical data from the September 2012 limited subsurface investigation combined with this study have identified elevated concentrations of contaminants within both soil and groundwater that will require appropriate management and disposal methods.



**Table 2: Groundwater Analytical Results**

Table 2: Groundwater																
Sample			CAESB-2		CAESB-3		CAESB-5A		CAESB-6		CAESB-7		CAESB-9		CAESB-11	
Analyte / Test Method	MDE Groundwater Standards	Units														
TPH-DRO / 8015	0.047	mg/L	<b>0.11</b>		<b>0.13</b>		<b>0.11</b>		<b>0.17</b>		<b>0.12</b>		<b>0.15</b>		ND	
TPH-GRO / 8015	47	ug/L	ND		ND											
<b>VOCs / 8260B</b>																
Acetone	550	ug/L	24		ND		ND		12		ND		ND		ND	
cis-1,2-Dichloroethane	70	ug/L	ND		ND		3.6		ND		2.4		ND		ND	
Chloroform	80	ug/L	ND		ND		3.9		ND		ND		ND		ND	
Methyl tert-butyl ether	20	ug/L	ND		2.7		ND									
Trichloroethene	5	ug/L	ND		2.3		ND		ND		1.5		ND		ND	
Tetrachloroethene	5	ug/L	ND		2.4		2.7		ND		<b>7.8</b>		ND		ND	
<b>SVOCs / 8270C</b>																
<b>Metals / 6020A</b>																
			Total	Dissolved												
Arsenic	10	ug/L	1.5	ND	2.4	ND	2.8	ND	7.0	ND	1.8	ND	ND	ND	1.2	ND
Beryllium	4	ug/L	ND	ND	1.8	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
Chromium	100	ug/L	4.4	ND	52	ND	30	ND	9.6	ND	5.9	ND	ND	ND	4.5	ND
Copper	1,300	ug/L	3.2	ND	24	ND	17	ND	8.1	ND	5.3	ND	ND	ND	2.3	ND
Lead	15	ug/L	6.4	ND	13	ND	<b>18</b>	ND	<b>34</b>	ND	7.9	ND	14	ND	2.3	ND
Nickel	73	ug/L	6.4	3.8	34	5.4	14	1.7	4.6	1.0	3.5	ND	ND	ND	2	ND
Selenium	50	ug/L	ND	ND	ND	ND	1.4	1.5	ND	ND	ND	ND	ND	ND	ND	
Zinc	5,000	ug/L	ND	ND	45	ND	47	ND	20	ND	ND	ND	ND	ND	ND	
ND: Non Detect <b>Bolded</b> values indicate exceedance of groundwater standard																
NS: Not Sampled																



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### **Potential Soil and Groundwater Contamination**

#### *Soil*

During the drilling activities, soil was continuously collected and screened using a PID to the boring terminus. PID soil screening measurements for all soil was negligible (ranging from 0 to 4.6 parts per million). No petroleum staining or odors were observed in any of the soil collected. Analytical results from the collected soil samples indicated that all seven boring locations contain concentrations of arsenic that exceed the MDE Non-Residential Clean-up Standards for soil. More specifically, composite soil samples collected from 2-10' BGS all reported levels of arsenic that exceed the MDE Non-Residential Clean-up Standards for soil; four of the seven composite sample collected from 10-20' BGS (CAESB-2, CAESB-6, CAESB-9 & CAESB-11) reported levels of arsenic that exceed the MDE Non-Residential Cleanup Standards.

Arsenic is a naturally occurring metal that is commonly found in undisturbed soils across Maryland, the concentrations observed in all of the soil samples collected are within the Anticipated Typical Concentrations (ATC) values established by the United States Geological Survey (USGS) for the eastern region (3.6 mg/kg) and central region (4.9 mg/kg) of Maryland. In addition to arsenic, six metals (chromium, copper, lead, mercury, nickel, and zinc), one SVOC (bis(2-ethylhexyl) phthalate), and one VOC (acetone) were detected in soil samples but were reported in concentrations below the MDE Non-Residential Clean-up standards. It should be noted that acetone is used in laboratory procedures and is widely considered a common lab contaminant.

TPH-DRO was detected in two boring locations, CAESB-6 (8-10') and CAESB-9 (6-8') but was reported at concentrations below the respective MDE Non-Residential Cleanup Standard. However, concentrations of TPH-DRO in soil collected from CAESB-9 (6-8'), located near the fuel dispensers and USTs at the H&S bakery facility, were reported at 71 mg/kg which is below the MDE Non-Residential Cleanup Standards but are above what MDE defines as "oil contaminated soil" (soil exceeding 10 mg/kg).

MDE Oil Control Program (OCP) guidance requires that petroleum contaminated soil that is disturbed during site activities be handled according to state and local regulations in regards to sediment control and disposal. More specifically, only soils with TPH concentrations below 230 mg/kg may remain in place so long as it "does not pose a risk or threat of adverse effects if left in place." According to MDE OCP, soil with TPH concentrations at or greater than 230 mg/kg would require appropriate disposal if soil is disturbed. No representative soil samples were collected near the active fueling station located at Eastern Avenue and Central Avenue due to the discovery of unmarked utilities in several attempts.

Furthermore, a soil sample collected during the July 2012 geotechnical drilling, at the intersection of Aliceanna Street and Central Avenue, did identify petroleum contaminated soil. Soil collected from soil boring BA-3, located at the southwest corner of the intersection, reported

TPH-DRO concentrations that exceeded the MDE Non-Residential Clean-up Standards for soil. This area was delineated during the September 2012 limited subsurface investigation and was determined to be an isolated impacted area. Construction efforts will likely encounter isolated pockets of contamination during soil excavation and will require appropriate handling and management procedures.

#### Generation of Regulated Waste Materials

A soil management plan, including sampling, should be created for excavations involving areas where onsite soil cannot be reused and requires disposal. In addition, a soil screening plan should be implemented for the handling and control of other excavation areas with indications of impacted soil and near existing petroleum facilities. Where excavated materials contain contaminant concentrations that require off-site treatment or disposal, contaminated materials shall be segregated from materials that do not require regulated disposal to whatever extent practicable. Segregated materials may require stockpiling of suspected contamination until representative samples have been tested to determine if the contaminant concentrations exceed regulatory levels. Stockpiled areas shall comply with MDE erosion control standards and shall be stockpiled in a designated staging area. Suspected contaminated materials shall be placed on, and completely covered by, strong plastic sheeting (or equivalent) while stored on-site until soil material is transported off-site for disposal or determined suitable to be reused as backfill.

#### Groundwater

Analytical results for the groundwater indicate that six of the seven boring locations (CAESB-2, CAESB-3, CAESB-4, CAESB-5A, CAESB-6, CAESB- 7 and CAESB-9) reported concentrations of TPH-DRO that exceed the MDE Groundwater Standards for Type I and II Aquifers. One VOC, tetrachloroethene (also known as “Perc”), was detected in groundwater collected from boring CAESB-7 at a concentration exceeding the MDE Groundwater Standard. Tetrachloroethene is a chlorocarbon that is commonly associated with dry cleaning activities and is also used in industrial activities such as degreasing metal parts; tetrachloroethene was also detected in two other sample locations (CAESB-2 and CAESB-7) but at concentrations below the respective MDE Groundwater Standard. In addition to tetrachloroethene, five other VOCs (acetone, cis-1,2-dichloroethane, chloroform, methyl tert-butyl ether and trichloroethene) were detected at various locations but were reported at concentrations below the MDE Groundwater Standards for Type I and II Aquifers.

The combined analytical results of collected groundwater samples from both subsurface investigations (September 2012 and July 2013 subsurface investigations) identified petroleum hydrocarbons (TPH-DRO), metals (lead) and VOCs (tetrachloroethene) as the contaminants of concern for groundwater. Petroleum hydrocarbons in groundwater, specifically TPH-DRO, were reported at concentrations exceeding the MDE groundwater standards consistently throughout the study area. Metals were reported in concentrations exceeding the MDE groundwater standards in groundwater standards in samples analyzed for total metals, however; concentrations for dissolved metals (filtered) were all below the MDE groundwater standards.



VOCs were primarily reported below the MDE regulatory levels with the exception of tetrachloroethene. Tetrachloroethene was detected in three of the seven groundwater samples collected but was only reported at a concentration exceeding the MDE groundwater standards in one of the locations (CAESB-7).

### **Groundwater Dewatering**

Based on these identified contaminants of concern, groundwater will require treatment prior to discharge. Groundwater contaminated with petroleum and VOCs are commonly treated on-site by containerizing the water before using a granular activated carbon filter to reduce organic contaminant levels prior to discharge. Reducing total metal concentrations can also be achieved by using activated carbon and bag filtration during the dewatering process. Both of these treatment methods require filtration media to be maintained and/or replaced during the dewatering process depending on the contamination levels. The process for discharging treated water will be required to adhere to the permit conditions of the MDE Water Management Administration for the discharge of treated groundwater from oil-contaminated groundwater and other substances.

## **Construction Considerations**

Certain measures should be taken to minimize potential risk to human health and safety and to the environment such as:

1. Project specific Health and Safety Plan (HASP): Should address anticipated exposure to contaminants within the project site. These contaminants may vary in physical and chemical states. The HASP should include appropriate personal protective equipment (gloves, eye-protection and coveralls) for specified tasks and procedures. Exposure routes that may be associated with construction activities include inhalation, ingestion, or dermal contact. Contaminant exposure will be greater to construction workers than it will for the general public due to the proximity to freshly excavated materials, open excavations and dewatering activities.
2. Environmental Monitoring: A qualified environmental professional should evaluate the conditions at each excavation area and specify appropriate personal protective equipment and potential monitoring equipment. The evaluation should also consider potential offsite impacts and environmental impacts from construction activities and changes in site conditions. Appropriate control measures should be determined and implemented based upon each evaluation.
3. Engineering Controls: Dust control/suppression measures, site-monitoring and appropriate personal protective equipment should be implemented to reduce incidental exposure to onsite workers and the surrounding community.



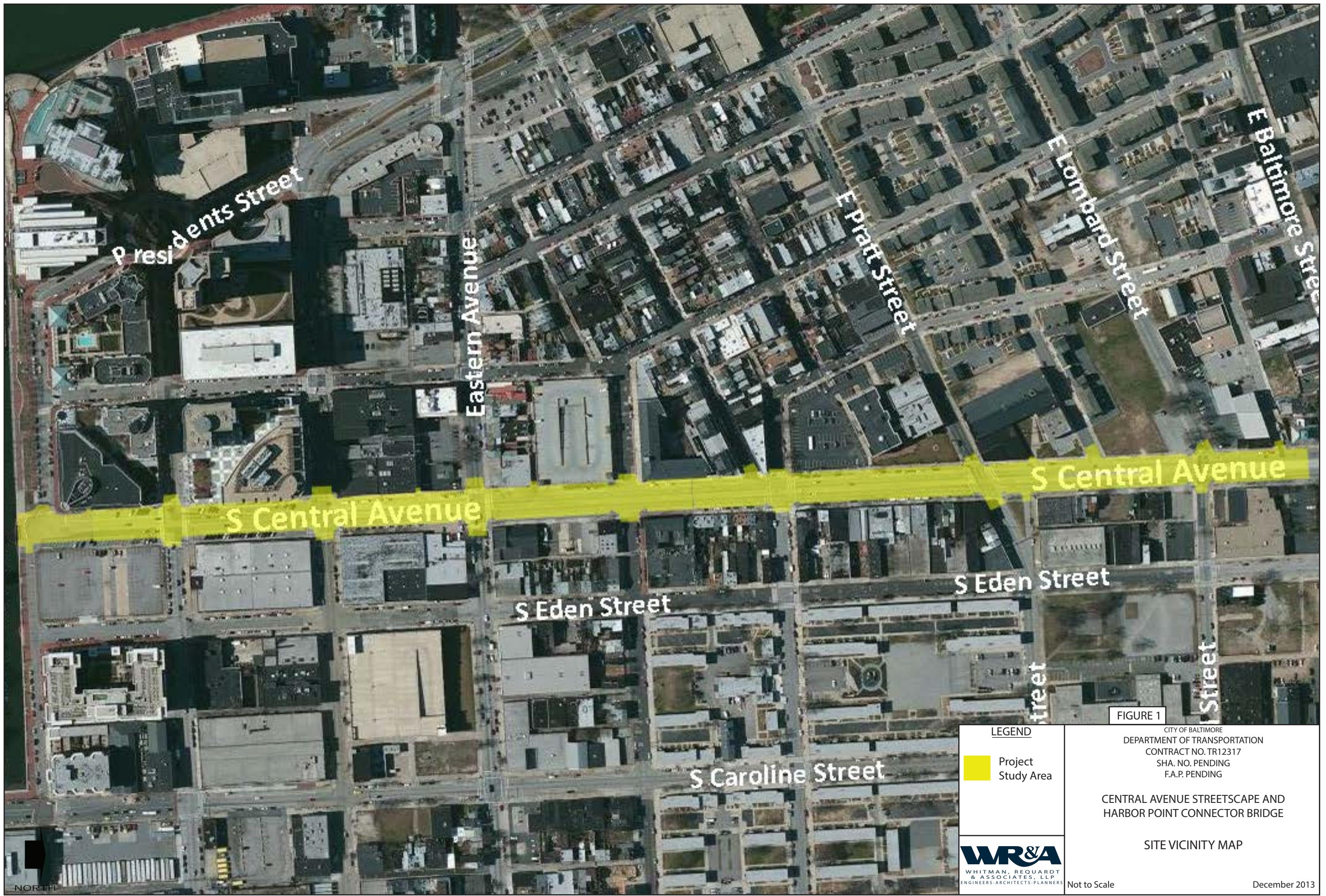
4. Institutional Controls: Appropriate procedures, such as fencing and controlled access to the site should be followed for excavation areas and on-site stockpiling areas or storage of spoils generated during the proposed construction efforts requiring off-site transport and disposal.

## **Limitations and Restrictions**

This investigation was limited to observations made during the field work conducted in the study area, the analytical data provided by the laboratory and the interpretation of that data. Although the investigation covered a large portion of the target study area, small isolated areas of soil and/or groundwater contaminants may exist and present an unforeseen exposure risk during excavation and/or construction activities. Certain areas of the study area could not be characterized due to the presence of existing underground utilities and auger refusal. This investigation was performed to identify the potential liabilities associated with the study area. The interpretations and recommendations provided from work performed in no way eliminate undiscovered hazards or the property owner's obligation to adhere to local, state and federal laws.



## **Appendix A: Figures**



REVISIONS			
NO.	DESCRIPTION	DATE	BY

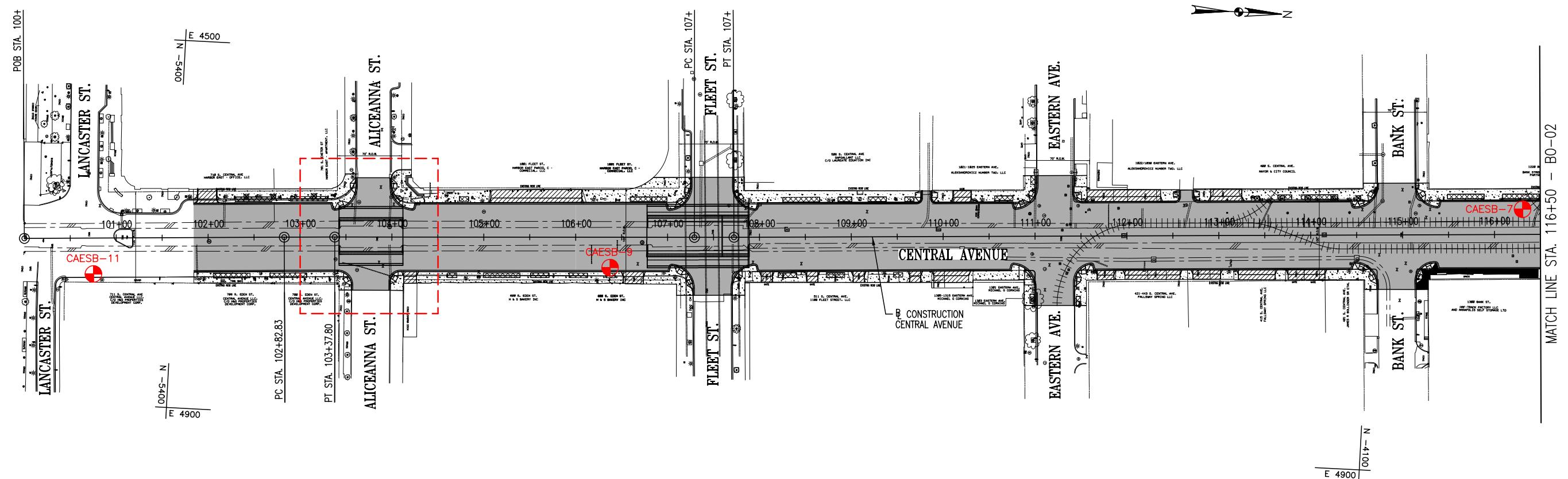
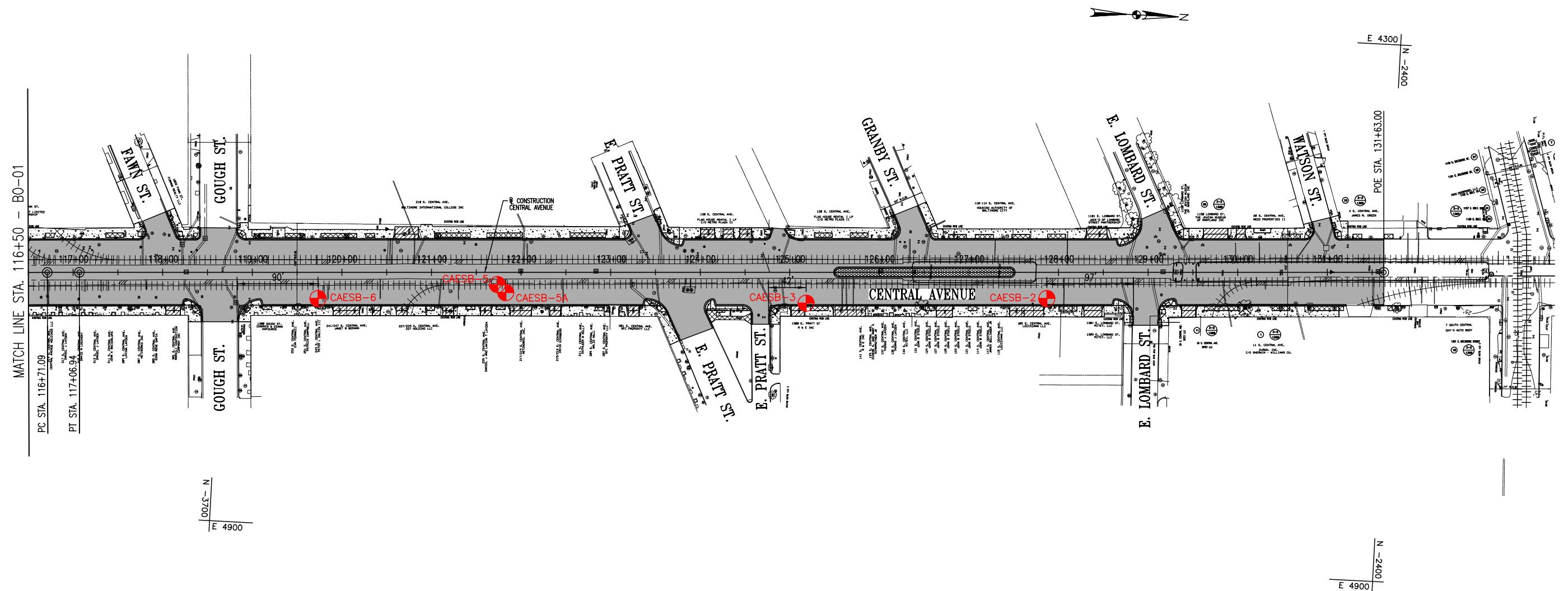


FIGURE 2A

BO-01

<b>LEGEND</b> <ul style="list-style-type: none"> <li><span style="color: red;">X-X</span> BORING LOCATION</li> <li><span style="border: 1px solid red; padding: 2px;"> </span> AREA COVERED IN LIMITED PHASE II (NOV. 2012)</li> </ul>	CITY OF BALTIMORE DEPARTMENT OF TRANSPORTATION CONTRACT NO. TR12317 SHA. NO. PENDING F.A.P. PENDING
 <b>WR&amp;A</b> <small>WHITMAN, REQUARDT &amp; ASSOCIATES, LLP</small> <small>80 South Charles Street, Baltimore, Maryland 21201</small>	CENTRAL AVENUE STREETSCAPE AND HARBOR POINT CONNECTOR BRIDGE BORING LOCATION PLAN STA. 100+00 TO STA. 116+50

REVISIONS			
NO.	DESCRIPTION	DATE	BY



## FIGURE 2B

B0-02



CITY OF BALTIMORE  
DEPARTMENT OF TRANSPORTATION

# CENTRAL AVENUE STREETSCAPE AND HARBOR POINT CONNECTOR BRIDGE

BORING LOCATION PLAN  
STA. 116+50 TO STA. 131+63

-60' DATE: MAY 2013

DATE: MAY, 2013

DRAWN BY: A.L.S.  
EXAMINED BY: N.Z.

## **Appendix B: Boring Logs, Soil Descriptions and PID Measurements**

## BORING LOG

FOR: PROJECT:	Baltimore City Central Avenue Phase II Reconstruction	HOLE NO: ELEV: SHT NO.:	CAESB-2				
	W.O. #: 31576-007	START DATE: 7/22/2013	COMPLTED: 7/22/2013				
ENCOUNTERED: CAVE-IN:	GROUND WATER OBSERVATIONS 10 FT; @ COMP: 8.9 FT; @ HRS. FT. FT; @ COMP: FT; @ HRS. FT.	DRILLING BY: E2CR DRILLER: Darrel Gough / Deidrich D-50 INSPECTOR: Arpit Patel WR&A REP.: Kevin T. Roberts					
HAMMER TYPE: BORING METHOD:	Manual HSA	SAMPLER TYPE: SS BOREHOLE DIA: 8"	ROD SIZE: ROCK CORE SIZE:				
DEPTH	CONSTRUCTION	BLOW COUNT	CLASS	DESCRIPTION	SAMPLE SUBMITTED	RECOV.	PID/FID (ppm)
2-4'		10-11-9-6	Fill	4.5" asphalt, 6.5" base gravel Brown/tan, F-MG silty SAND, quartz, dry, little wood in cuttings, some gravel, no petroleum odor		8"	1.4 ppm
4-6'		4-6-5-5	Fill	Tan clayey SAND, F-MG little oyster shell, moist to wet, no petroleum odor		15"	0ppm
6-8'		8-5-6-13	Fill	Tan, coarse SAND, some quartz and weathered rock, dry, no petroleum odor		16"	0ppm
8-10'		24-27-30-35	Fill	SAA, quartz frags		14"	0ppm
10-12'		7-6-44-7	Fill	Tan gravelly SAND, some clay, no petroleum odor, wet		15"	0ppm
12-14'		3-3-4-5	Fill	SAA, mixed with 14-16 due to minimum recovery		2"	1.3 ppm
14-16'		6-6-5-7	Fill	SAA		4"	SAA
16-18'		6-6-7-8	Fill	Dark brown, FG SILT, micaceous, soft, organics (wood), moist		21"	2.1 ppm
18-20'		6-5-5-7		Grey FG SILT, slight plastic, moist  Terminate boring at 20' BGS		14"	1.6 ppm
<b>Boring Method</b> HSA: HOLLOW STEM AUGER HAITR: HAND AUGER & TRIPOD DC: DRIVEN CASING MD: MUD DRILLING DP: DIRECT PUSH AR: AIR ROTARY/AIR HAMMER			<b>Sampler Type:</b> SPT: STANDARD PENETRATION TEST: DRIVING 2" O.D. SAMPLER 1.0 FT W/ 140 LB HAMMER FALLING 30" BLOW COUNTS RECORDED AS: AUGER SAMPLE RC: ROCK CORE SS: SPLIT SPOON @ST: SHELBY TUBE 6" INTERVALS. (SPLIT SPOON)				<b>Abbreviations:</b> NA: Not Applicable SAA: Same as above F-MG: fine to medium grained BGS: below ground surface



## BORING LOG

FOR: PROJECT:	Baltimore City Central Avenue Phase II Reconstruction	W.O. #: <u>31576-007</u>	HOLE NO: <u>CAESB-3</u> ELEV: _____ SHT NO.: _____				
ENCOUNTERED: CAVE-IN:	GROUND WATER OBSERVATIONS <u>10</u> FT; @ COMP: <u>8.5</u> FT; @ _____ HRS. _____ FT. _____ FT; @ COMP: _____ FT; @ _____ HRS. _____ FT.	START DATE <u>7/22/2013</u> COMPLTED: <u>7/22/2013</u>	DRILLING BY <u>E2CR</u> DRILLER: <u>Darrel Gough / Deidrich D-50</u> INSPECTOR: <u>Arpit Patel</u> WR&A REP.: <u>Kevin T. Roberts</u>				
HAMMER TYPE: BORING METHOD:	Manual <u>HSA</u>	SAMPLER TYPE: <u>SS</u> BOREHOLE DIA: <u>8"</u>	ROD SIZE: _____ ROCK CORE SIZE: _____				
DEPTH	WELL CONSTRUCTION	BLOW COUNT	CLASS	DESCRIPTION	SAMPLE SUBMITTED	RECOV.	PID/FID (ppm)
2-4'		22-23-20-22	Fill	2" asphalt, 3" brick, 8" gravel base Red/tan F-MG SAND, some brick and quartz gravel, dry, no petroleum odor	*11:15	15"	0.3 ppm
4-6'		12-9-10-9	Fill	Tan silty SAND, FG some mica, damp no petroleum odor		18"	0.4 ppm
6-8'		8-7-17-9	Fill	SAA, moist		4"	0.8 ppm
8-10'		2-4-4-5	Fill	Grey CLAY, some silt and mica, wet, no petroleum odor		20"	2.1 ppm
10-12'		4-4-8-14	Fill	13" -SAA 7" -Grey brown F-MG SILTY SAND, some mica, wet, no petroleum odor		20"	1.2 ppm
12-14'		31-32-26-21	GP	Red F-MG, well-graded, F-MG, coarse SAND, quartz gravel, wet, no petroleum odor		12"	2.2 ppm
14-16'		21-19-27-21	GP	SAA		22"	2.7 ppm
16-18'		NA	NA	No sample collected -driller missed depth		NA	NA
18-20'		9-6-5-8	CL	Tan/red CLAY, some silt, moist, no odor		20"	3.2 ppm
				Terminate boring at 20' BGS			
<b>Boring Method</b> HSA: HOLLOW STEM AUGER HAIR: HAND AUGER & TRIPOD DC: DRIVEN CASING MD: MUD DRILLING DP: DIRECT PUSH AR: AIR ROTARY/AIR HAMMER			<b>Sampler Type:</b> SPT: STANDARD PENETRATION TEST: DRIVING 2" O.D. SAMPLER 1.0 FT W/ 140 LB HAMMER FALLING 30" BLOW COUNTS RECORDED AS: AUGER SAMPLE RC: ROCK CORE SS: SPLIT SPOON @ST: SHELBY TUBE 6" INTERVALS. (SPLIT SPOON)				<b>Abbreviations:</b> NA: Not Applicable SAA: Same as above F-MG: fine to medium grained BGS: below ground surface



## BORING LOG

FOR: PROJECT:	Baltimore City Central Avenue Phase II Reconstruction  W.O. #: <u>31576-007</u>	HOLE NO: <u>CAESB-5A</u> ELEV: SHT NO.:					
ENCOUNTERED: CAVE-IN:	GROUND WATER OBSERVATIONS 10 FT; @ COMP: _____ FT; @ _____ HRS. _____ FT. _____ FT; @ COMP: _____ FT; @ _____ HRS. _____ FT.	START DATE: <u>7/24/2013</u> COMPLTED: <u>7/24/2012</u> DRILLING BY: <u>E2CR</u> DRILLER: <u>Darrel Gough / Deidrich D-50</u> INSPECTOR: <u>Arpit Patel</u> WR&A REP.: <u>Kevin T. Roberts</u>					
HAMMER TYPE: BORING METHOD:	Manual <u>HSA</u>	SAMPLER TYPE: <u>SS</u> BOREHOLE DIA: <u>8"</u> ROD SIZE: ROCK CORE SIZE:					
DEPTH	WELL CONSTRUCTION	BLOW COUNT	CLASS	DESCRIPTION	SAMPLE SUBMITTED	RECOV.	PID/FID (ppm)
				4" asphalt, 6" belgian block, 1' gravel base			
2-4'		13-11-6-6	Fill	Tan F-MG, silty SAND, dry, some brick frags, no petroleum odor	*13:00	14"	2.6 ppm
4-6'		3-11-10-8	Fill	Brown F-MG SILTY SAND, some clay, dry little gravel, dry, no petroleum odor		5"	1.2 ppm
6-8'		4-6-10-12	Fill	SAA, moist to wet		14"	1.9 ppm
8-10'		8-14-11-8	Fill	Tan/red well sorted SAND, little gravel, wet no petroleum odor		10"	2.1 ppm
10-12'		7-5-5-6	Fill	Brown/tan well sorted coarse SAND, wet no petroleum odor		13"	2.8 ppm
12-14'		8-6-8-4		SAA		14	3.2 ppm
14-16'		2-4-4-9		Grey well sorted, coarse SAND, some gravel wet, no petroleum odor		6"	1.9 ppm
16-18'		5-6-12-7		SAA		6"	2.9 ppm
18-20'		15-20-11-5		SAA		11"	2.4 ppm
				Terminate boring at 20' BGS			
<u>Boring Method</u> HSA: HOLLOW STEM AUGER HATR: HAND AUGER & TRIPOD DC: DRIVEN CASING MD: MUD DRILLING DP: DIRECT PUSH AR: AIR ROTARY/AIR HAMMER			<u>Sampler Type:</u> SPT: STANDARD PENETRATION TEST: DRIVING 2" O.D. SAMPLER 1.0 FT W/ 140 LB HAMMER FALLING 30" BLOW COUNTS RECORDED AS: AUGER SAMPLE RC: ROCK CORE SS: SPLIT SPOON @ST: SHELBY TUBE 6" INTERVALS. (SPLIT SPOON)				<u>Abbreviations:</u> NA: Not Applicable SAA: Same as above F-MG: fine to medium grained BGS: below ground surface



## BORING LOG

FOR: PROJECT:	Baltimore City Central Avenue Phase II Reconstruction	W.O. #: <u>31576-007</u>	HOLE NO: <u>CAESB-6</u> ELEV: _____ SHT NO.: _____				
ENCOUNTERED: CAVE-IN:	GROUND WATER OBSERVATIONS <u>10</u> FT; @ COMP: <u>8.9</u> FT; @ ____ HRS. ____ FT. ____ FT; @ COMP: ____ FT; @ ____ HRS. ____ FT.	START DATE <u>7/23/2013</u> COMPLTED: <u>7/23/2013</u>	DRILLING BY <u>E2CR</u> DRILLER: <u>Darrel Gough / Deidrich D-50</u> INSPECTOR: <u>Arpit Patel</u> WR&A REP.: <u>Kevin T. Roberts</u>				
HAMMER TYPE: BORING METHOD:	Manual <u>HSA</u>	SAMPLER TYPE: <u>SS</u> BOREHOLE DIA: <u>8"</u>	ROD SIZE: ROCK CORE SIZE:				
DEPTH	WELL CONSTRUCTION	BLOW COUNT	CLASS	DESCRIPTION	SAMPLE SUBMITTED	RECOV.	PID/FID (ppm)
				4" asphalt, 6" belgian block			
2-4'		6-16-6-5	Fill	Tan/brown SILTY SAND, some well sorted sand, some brick frags and quartz gravel, dry no petroleum odor	*13:00	10"	1.3 ppm
4-6'		6-5-5-2	Fill	SAA, moist		13"	0.4 ppm
6-8'		3-2-2-2	Fill	Brown/grey SILTY SAND, some well sorted sand and small gravel, moist, no petroleum odor		8"	1.9 ppm
8-10'		18-22-9-5	Fill	6" -SAA 1" -Brick frags 1" -Tan/grey F-MG SAND, wet, no petroleum odor		8"	2.7 ppm
10-12'		10-5-3-8	SM	Tan F-MG SILTY SAND, little clay, wet no petroleum odor		8"	2.1 ppm
12-14'		5-3-3-5	SW	Grey/tan F-MG SAND, some gravel, wet, no petroleum odor		8"	2.2 ppm
14-16'		6-12-8-22	Fill	Tan/brown well sorted GRAVELLY SAND, wet, no petroleum odor		16"	2.2 ppm
16-18'		23-20-20-12	Fill	SAA		20"	2.1 ppm
18-20'		5-6-6-10	Fill	SAA		17"	1.5 ppm
				Terminate boring at 20' BGS			
<b>Boring Method</b>			<b>Sampler Type:</b>				
HSA: HOLLOW STEM AUGER HAIR: HAND AUGER & TRIPOD DC: DRIVEN CASING MD: MUD DRILLING DP: DIRECT PUSH AR: AIR ROTARY/AIR HAMMER			SPT: STANDARD PENETRATION TEST: DRIVING 2" O.D. SAMPLER 1.0 FT W/ 140 LB HAMMER FALLING 30" BLOW COUNTS RECORDED AS: AUGER SAMPLE RC: ROCK CORE SS: SPLIT SPOON @ST: SHELBY TUBE 6" INTERVALS. (SPLIT SPOON)				
			Abbreviations: NA: Not Applicable SAA: Same as above F-MG: fine to medium grained BGS: below ground surface				



## BORING LOG

FOR: PROJECT:	Baltimore City Central Avenue Phase II Reconstruction	HOLE NO: ELEV: SHT NO.: START DATE: <u>7/24/2013</u>   COMPLTED: <u>7/24/2013</u>	CAESB-7				
ENCOUNTERED: CAVE-IN:	GROUND WATER OBSERVATIONS <u>8.5</u> FT; @ COMP: _____ FT; @ _____ HRS. _____ FT. _____ FT; @ COMP: _____ FT; @ _____ HRS. _____ FT.	DRILLING BY E2CR DRILLER: Darrel Gough / Deidrich D-50 INSPECTOR: Arpit Patel WR&A REP.: Kevin T. Roberts					
HAMMER TYPE: BORING METHOD:	<u>Manual</u> <u>HSA</u>	SAMPLER TYPE: <u>SS</u> BOREHOLE DIA: <u>8"</u>	ROD SIZE: ROCK CORE SIZE:				
DEPTH	WELL CONSTRUCTION	BLOW COUNT	CLASS	DESCRIPTION	SAMPLE SUBMITTED	RECOV.	PID/FID (ppm)
2-4'		6-5-4-6	Fill	2.5" asphalt, 6" belgian block	*13:00	18"	1.6 ppm
4-6'		5-5-5-5	Fill	Tan/red CLAY, some silt, moist no petroleum odor		14"	2.7 ppm
6-8'		3-2-2-13	Fill	SAA		24"	3.5 ppm
8-10'		30-13-19-17	Fill	Tan/grey SILTY SAND, little clay, moist to wet no petroleum odor		16"	3.8 ppm
10-12'		5-4-2-2	Fill	Grey well sorted SAND, some gravel, wet no petroleum odor		6"	4.2 ppm
12-14'		1-2-2-2	Fill	SAA		24"	3.1 ppm
14-16'		6-9-14-19	GP	Grey/brown F-MG SILTY SAND, little organics, moist, no petroleum odor		10"	3.6 ppm
16-18'		18-20-25-24	GP	Tan well sorted coarse SAND, some gravel, wet no petroleum odor		8"	4.1 ppm
18-20'		15-13-7-6	GP	SAA		12"	3.6 ppm
Terminate boring at 20' BGS							
<b>Boring Method</b> HSA: HOLLOW STEM AUGER HAIVR: HAND AUGER & TRIPOD DC: DRIVEN CASING MD: MUD DRILLING DP: DIRECT PUSH AR: AIR ROTARY/AIR HAMMER		<b>Sampler Type:</b> SPT: STANDARD PENETRATION TEST: DRIVING 2" O.D. SAMPLER 1.0 FT W/ 140 LB HAMMER FALLING 30" BLOW COUNTS RECORDED AS: AUGER SAMPLE RC: ROCK CORE SS: SPLIT SPOON @ST: SHELBY TUBE 6" INTERVALS. (SPLIT SPOON)				<b>Abbreviations:</b> NA: Not Applicable SAA: Same as above F-MG: fine to medium grained BGS: below ground surface	



## BORING LOG

FOR: PROJECT:	<b>Baltimore City Central Avenue Phase II Reconstruction</b>			HOLE NO: <b>CAESB-9</b>			
	W.O. #: <b>31576-007</b>			ELEV: SHT NO.: START DATE <b>7/25/2013</b> COMPLTED: <b>7/25/2013</b>			
ENCOUNTERED: CAVE-IN:	<b>GROUND WATER OBSERVATIONS</b> 5 FT; @ COMP: FT; @ HRS. FT. FT; @ COMP: FT; @ HRS. FT.			DRILLING BY <b>E2CR</b> DRILLER: <b>Darrel Gough / Deidrich D-50</b> INSPECTOR: <b>Arpit Patel</b> WR&A REP.: <b>Kevin T. Roberts</b>			
HAMMER TYPE: BORING METHOD:	<b>Manual</b> <b>HSA</b>	SAMPLER TYPE: <b>SS</b> BOREHOLE DIA: <b>8"</b>	ROD SIZE: ROCK CORE SIZE:				
DEPTH	WELL CONSTRUCTION	BLOW COUNT	CLASS	DESCRIPTION	SAMPLE SUBMITTED	RECOV.	PID/FID (ppm)
				4" asphalt, 6" belgian block			
2-4'		4-10-4-4	Fill	Brown/tan well sorted SAND, some gravel, some brick frags, no petroleum odor	*13:00	4"	0.3 ppm
4-6'		4-2-2-2	Fill	No Recovery		NA	NA
6-8'		2-2-4-6	Fill	Dark brown SILTY SAND and CLAYmix, terra cotta frags, moist, no petroleum odor		8"	2.5 ppm
8-10'		4-4-4-4	Fill	Dark brown SILTY SAND, some clay, some small gravelmoist to wet, no petroleum odor		10"	4.5 ppm
10-12'		3-2-1-3	Fill	Dark brown/grey coarse SAND and some gravel, moist to wet, no petroleum odor		5"	3.7 ppm
12-14'		3-2-2-2	Fill	Grey F-MG SAND, wet, soft no petroleum odor		12"	4.3 ppm
14-16'		3-2-4-5	Fill	Grey/ dark brown SILTY SAND, moist, soft no petroleum odor		18"	3.1 ppm
16-18'		3-2-2-3	Fill	SAA		12"	4.2 ppm
18-20'		8-17-21-1	GP	Tan coarse SAND, MG, quartz frags, wet no petroleum odor		5"	4.6 ppm
				Terminate boring at 20' BGS			
<b>Boring Method</b>			<b>Sampler Type:</b> SPT: STANDARD PENETRATION TEST: DRIVING 2" O.D. SAMPLER 1.0 FT W/ 140 LB HAMMER FALLING 30" BLOW COUNTS RECORDED AS: AUGER SAMPLE RC: ROCK CORE SS: SPLIT SPOON @ST: SHELBY TUBE 6" INTERVALS. (SPLIT SPOON)				<b>Abbreviations:</b> NA: Not Applicable SAA: Same as above F-MG: fine to medium grained BGS: below ground surface
HSA: HOLLOW STEM AUGER HAITR: HAND AUGER & TRIPOD DC: DRIVEN CASING MD: MUD DRILLING DP: DIRECT PUSH AR: AIR ROTARY/AIR HAMMER							



## BORING LOG

FOR: PROJECT:	Baltimore City Central Avenue Phase II Reconstruction	W.O. #: <u>31576-007</u>	HOLE NO: <u>CAESB-11</u> ELEV: _____ SHT NO.: _____				
		START DATE: <u>7/25/2013</u>	COMPLTED: <u>7/25/2013</u>				
ENCOUNTERED: CAVE-IN:	GROUND WATER OBSERVATIONS <u>4</u> FT; @ COMP: <u>      </u> FT; @ <u>      </u> HRS. <u>      </u> FT. <u>      </u> FT; @ COMP: <u>      </u> FT; @ <u>      </u> HRS. <u>      </u> FT.	DRILLING BY <u>E2CR</u> DRILLER: <u>Darrel Gough / Deidrich D-50</u> INSPECTOR: <u>Arpit Patel</u> WR&A REP.: <u>Kevin T. Roberts</u>					
HAMMER TYPE: BORING METHOD:	Manual <u>HSA</u>	SAMPLER TYPE: <u>SS</u> BOREHOLE DIA: <u>8"</u>	ROD SIZE: ROCK CORE SIZE: _____				
DEPTH	WELL CONSTRUCTION	BLOW COUNT	CLASS	DESCRIPTION	SAMPLE SUBMITTED	RECOV.	PID/FID (ppm)
2-4'		5-2-2-2	Fill	4" asphalt, 5" base gravel 6"-Dark brown SILT, little sand, organic odor, moist 4" -Tan SILTY SAND, dry, no petroleum odor		10"	2.5 ppm
4-6'		2-2-2-2	Fill	Dark brown SILTY SAND, micaceous little sand moist, soft, no petroleum odor	*9:00	22"	1.6 ppm
6-8'		2-2-1-2	Fill	SAA		18"	1.4 ppm
8-10'		3-2-1-2	Fill	SAA, very soft		14"	1.8 ppm
10-12'		wh/18" 3	Fill	SAA, very soft, becomes wet		21"	1.7 ppm
12-14'		wh/6" 2-2-1	Fill	SAA, few oyster shells		20"	2.2 ppm
14-16'		3-2-2-3	Fill	SAA, few wood chunks		24"	2.3 ppm
16-18'		3-3-3-3	Fill	SAA		24"	4.6 ppm
18-20'		5-8-15-13	GP	Tan well sorted, coarse SAND, some gravel, wet Terminate boring at 20' BGS		6"	2.7 ppm
<b>Boring Method:</b> HSA: HOLLOW STEM AUGER HA/TR: HAND AUGER & TRIPOD DC: DRIVEN CASING MD: MUD DRILLING DP: DIRECT PUSH AR: AIR ROTARY/AIR HAMMER			<b>Sampler Type:</b> SPT: STANDARD PENETRATION TEST: DRIVING 2" O.D. SAMPLER 1.0 FT W/ 140 LB HAMMER FALLING 30" BLOW COUNTS RECORDED AS: AUGER SAMPLE RC: ROCK CORE SS: SPLIT SPOON @ST: SHELBY TUBE 6" INTERVALS. (SPLIT SPOON)				<b>Abbreviations:</b> NA: Not Applicable SAA: Same as above F-MG: fine to medium grained BGS: below ground surface

### **Appendix C: Lab Reports**



# Analytical Report for

Whitman, Requardt & Associates, LLP.

Certificate of Analysis No(s).:

13072314, 13072429, 13072601, 13072911, 13080206

Project Manager: Kevin Roberts

Project Name : Central Ave.

Project Location: Baltimore, MD

Project ID : 31576-007



August 12, 2013

Phase Separation Science, Inc.

6630 Baltimore National Pike

Baltimore, MD 21228

Phone: (410) 747-8770

Fax: (410) 788-8723

**OFFICES:**  
6630 BALTIMORE NATIONAL PIKE  
ROUTE 40 WEST  
BALTIMORE, MD 21228  
410-747-8770  
800-932-9047  
FAX 410-788-8723

# PHASE SEPARATION SCIENCE, INC.



August 12, 2013

**Kevin Roberts**  
**Whitman, Requardt & Associates, LLP.**  
3701 Pender Drive, Suite 450  
Fairfax, VA 22030

Reference: PSS Work Order(s) No: **13072314, 13072429, 13072601, 13072911, 13080206**

Project Name: Central Ave.

Project Location: Baltimore, MD

Project ID.: 31576-007

Dear Kevin Roberts :

This report includes the analytical results from the analyses performed on the samples received under the project name referenced above and identified with the Phase Separation Science (PSS) Work Order(s) numbered **13072314, 13072429, 13072601, 13072911, 13080206**.

All work reported herein has been performed in accordance with current NELAP standards, referenced methodologies, PSS Standard Operating Procedures and the PSS Quality Assurance Manual unless otherwise noted in the Case Narrative Summary. PSS is limited in liability to the actual cost of the sample analysis done.

PSS reserves the right to return any unused samples, extracts or related solutions. Otherwise, the samples are scheduled for disposal, without any further notice, on September 2, 2013. This includes any samples that were received with a request to be held but lacked a specific hold period. It is your responsibility to provide a written request defining a specific disposal date if additional storage is required. Upon receipt , the request will be acknowledged by PSS, thus extending the storage period.

This report shall not be reproduced except in full, without the written approval of an authorized PSS representative. A copy of this report will be retained by PSS for at least 5 years, after which time it will be disposed of without further notice, unless prior arrangements have been made.

We thank you for selecting Phase Separation Science, Inc. to serve your analytical needs. If you have any questions concerning this report, do not hesitate to contact us at 410-747-8770 or info@phaseonline.com.

Sincerely,

**Dan Prucnal**

Laboratory Manager



## Sample Summary

**Client Name: Whitman, Requardt & Associates, LLP.**

**Project Name: Central Ave.**

**Work Order Number(s): 13072314, 13072429, 13072601, 13072911, 13080206**

**Project ID: 31576-007**

The following samples were received under chain of custody by Phase Separation Science (PSS):

Lab Sample Id	Sample Id	Matrix	Date/Time Collected	Date/Time Received
13072314-001	CAESB-2 8-10'	SOIL	07/22/13 12:20	07/23/13 16:40
13072314-002	CAESB-2 2-10'	SOIL	07/22/13 12:20	07/23/13 16:40
13072314-003	CAESB-2 10-20	SOIL	07/22/13 12:20	07/23/13 16:40
13072314-004	CAESB-3 8-10'	SOIL	07/22/13 15:00	07/23/13 16:40
13072314-005	CAESB-3 2-10'	SOIL	07/22/13 15:00	07/23/13 16:40
13072314-006	CAESB-3 10-20'	SOIL	07/22/13 15:00	07/23/13 16:40
13072314-007	CAESB-2	GROUND WATER	07/23/13 08:30	07/23/13 16:40
13072314-008	CAESB-6 2-10'	SOIL	07/23/13 15:00	07/23/13 16:40
13072314-009	CAESB-6 10-20'	SOIL	07/23/13 15:00	07/23/13 16:40
13072314-010	CAESB-6 8-10'	SOIL	07/23/13 15:00	07/23/13 16:40
13072314-011	CAESB-3	GROUND WATER	07/23/13 15:30	07/23/13 16:40
13072429-001	CAESB-6	GROUND WATER	07/24/13 09:00	07/24/13 16:26
13072429-002	CAESB-5A 2-10'	SOIL	07/24/13 13:00	07/24/13 16:26
13072429-003	CAESB-5A 10-20'	SOIL	07/24/13 13:00	07/24/13 16:26
13072429-004	CAESB-5A 6-8'	SOIL	07/24/13 13:00	07/24/13 16:26
13072429-005	CAESB-7 2-10'	SOIL	07/24/13 15:30	07/24/13 16:26
13072429-006	CAESB-7 10-20'	SOIL	07/24/13 15:30	07/24/13 16:26
13072429-007	CAESB-7 6-8	SOIL	07/24/13 15:30	07/24/13 16:26
13072601-001	CAESB-5A	GROUND WATER	07/25/13 10:30	07/26/13 08:10
13072601-002	CAESB-7	GROUND WATER	07/25/13 09:00	07/26/13 08:10
13072601-003	CAESB-11 4-6'	SOIL	07/25/13 14:20	07/26/13 08:10
13072601-004	CAESB-11 2-10'	SOIL	07/25/13 14:20	07/26/13 08:10
13072601-005	CAESB-11 10-20'	SOIL	07/25/13 14:20	07/26/13 08:10
13072601-006	CAESB-9 6-8'	SOIL	07/25/13 17:30	07/26/13 08:10
13072601-007	CAESB-9 2-10'	SOIL	07/25/13 17:30	07/26/13 08:10
13072601-008	CAESB-9 10-20'	SOIL	07/25/13 17:30	07/26/13 08:10
13072911-001	CAESB-11	GROUND WATER	07/29/13 09:00	07/29/13 13:21
13072911-002	CAESB-9	GROUND WATER	07/29/13 11:00	07/29/13 13:21
13080206-001	CAESB-11	GROUND WATER	07/29/13 09:00	07/29/13 13:21
13080206-002	CAESB-9	GROUND WATER	07/29/13 11:00	07/29/13 13:21

Please reference the Chain of Custody and Sample Receipt Checklist for specific container counts and preservatives. Any sample conditions not in compliance with sample acceptance criteria are described in Case Narrative Summary.



## Sample Summary

**Client Name: Whitman, Requardt & Associates, LLP.**

**Project Name: Central Ave.**

**Work Order Number(s): 13072314, 13072429, 13072601, 13072911, 13080206**

**Notes:**

1. The presence of a common laboratory contaminant such as methylene chloride may be considered a possible laboratory artifact. Where observed, appropriate consideration of data should be taken.
2. The following analytical results are never reported on a dry weight basis: pH, flashpoint, moisture and paint filter test.
3. Drinking water samples collected for the purpose of compliance with SDWA may not be suitable for their intended use unless collected by a certified sampler [COMAR 26.08.05.07.C.2].
4. The analyses of 1,2-dibromo-3-chloropropane (DBCP) and 1,2-dibromoethane (EDB) by EPA 524.2 and calcium, magnesium, sodium and iron by EPA 200.8 are not currently promulgated for use in testing to meet the Safe Drinking Water Act and as such cannot be used for compliance purposes. The listings of the current promulgated methods for testing in compliance with the Safe Drinking Water Act can be found in the 40 CFR part 141.1, for the primary drinking water contaminates, and part 141.3, for the secondary drinking water contaminates.
5. The analyses of chlorine, pH, dissolved oxygen, temperature and sulfite for non-potable water samples tested for compliance for Virginia Pollution Discharge Elimination System (VDPES) permits and Virginia Pollutant Abatement (VPA) permits, have a maximum holding time of 15 minutes established by 40CFR136.3.

**Standard Flags/Abbreviations:**

- B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- C Results Pending Final Confirmation.
- E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- Fail The result exceeds the regulatory level for Toxicity Characteristic (TCLP) as cited in 40 CFR 261.24 Table 1.
- J The target analyte was positively identified below the reporting limit but greater than the LOD.
- LOD Limit of Detection. An estimate of the minimum amount of a substance that an analytical process can reliably detect. An LOD is analyte and matrix specific.
- ND Not Detected at or above the reporting limit.
- RL PSS Reporting Limit.
- U Not detected.



# Case Narrative Summary

**Client Name:** Whitman, Requardt & Associates, LLP.

**Project Name:** Central Ave.

Work Order Number(s): 13072314, 13072429, 13072601, 13072911, 13080206

Project ID: 31576-007

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Any holding time exceedances, deviations from the method specifications, regulatory requirements or variations to the procedures outlined in the PSS Quality Assurance Manual are outlined below.

**Sample Receipt:**

13072314: Sample(s) received at a temperature greater than 6 degrees C and ice was present.

**General Comments:**

**Sample Receipt:**

13072429: All sample receipt conditions were acceptable.

**General Comments:**

**Sample Receipt:**

13072601: Received two soil jars with sample identification of CAESB-11 6-8' not on the COC. Date and time obtained from container label. Placed on hold per client.

**General Comments:**

13072601: The revised report changes the sample IDs for samples 13072601-001 and -002. The laboratory labels for Groundwater samples CAESB-7 and CAESB-5A were switched during sample receipt.

**Sample Receipt:**

13072911: All sample receipt conditions were acceptable.

**General Comments:**

**Sample Receipt:**

13080206: Refer to previous Work Order 13072911.

**General Comments:**

**Analytical:**

**Dissolved PP Metals**

**Batch: 107610**

Matrix Spikes had low recoveries for Arsenic, Beryllium, Chromium, Lead, Mercury, Nickel, Copper, Selenium, Silver.

**Batch: 107678**

Interference Check had a Copper recovery of 77% and a Zinc recovery of 76%. Limits are 80-120%

**PP Metals**

**Batch: 107682**

Interference Check had a Zinc recovery of 76%. Limits are 80-120%.

**Total Petroleum Hydrocarbons-GRO**



# Case Narrative Summary

**Client Name:** Whitman, Requardt & Associates, LLP.

**Project Name:** Central Ave.

Work Order Number(s): 13072314, 13072429, 13072601, 13072911, 13080206

Project ID: 31576-007

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**Batch: 107551**

LCS GRO recovery was 119%. The QC limit is 65%-103%.

**Total Petroleum Hydrocarbons-GRO**

**Batch: 107609**

LCS recovery was 118%. The QC limit is 65%-103%.

**Sample Preparation:**

**TCL Semivolatile Organic Compounds**

**Preparation Batch: 46824**

'Matrix spike/ matrix spike duplicate analyses were not performed due to insufficient sample quantity.'

**Total Petroleum Hydrocarbons - DRO**

**Preparation Batch: 46779**

'Matrix spike/ matrix spike duplicate analyses were not performed due to insufficient sample quantity.'

**Preparation Batch: 46802**

'Matrix spike/ matrix spike duplicate analyses were not performed due to insufficient sample quantity.'

**Preparation Batch: 46820**

'Matrix spike/ matrix spike duplicate analyses were not performed due to insufficient sample quantity.'

**NELAP accreditation was held for all analyses performed unless noted below. See [www.phaseonline.com](http://www.phaseonline.com) for complete PSS scope of accreditation.**

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 13072314, 13072429, 13072601, 13072911, 13080206

**Whitman, Requardt & Associates, LLP., Fairfax, VA**

August 12, 2013

Project Name: Central Ave.

Project Location: Baltimore, MD

Project ID: 31576-007

<b>Sample ID: CAESB-2 8-10'</b>	<b>Date/Time Sampled: 07/22/2013 12:20</b>			<b>PSS Sample ID: 13072314-001</b>				
<b>Matrix: SOIL</b>	<b>Date/Time Received: 07/23/2013 16:40</b>			<b>% Solids: 96</b>				
Total Petroleum Hydrocarbons - DRO	Analytical Method: SW-846 8015 C			Preparation Method: 3550				
	<b>Result</b>	<b>Units</b>	<b>RL</b>	<b>Flag</b>	<b>Dil</b>	<b>Prepared</b>	<b>Analyzed</b>	<b>Analyst</b>
TPH-DRO (Diesel Range Organics)	ND	mg/kg	4.1		1	07/25/13	07/25/13 23:43	1040
Total Petroleum Hydrocarbons-GRO	Analytical Method: SW-846 8015C			Preparation Method: 5030				
	<b>Result</b>	<b>Units</b>	<b>RL</b>	<b>Flag</b>	<b>Dil</b>	<b>Prepared</b>	<b>Analyzed</b>	<b>Analyst</b>
TPH-GRO (Gasoline Range Organics)	ND	ug/kg	100		1	07/24/13	07/24/13 15:22	1035

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August 12, 2013

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<b>Sample ID: CAESB-2 8-10'</b>		<b>Date/Time Sampled: 07/22/2013 12:20</b>				<b>PSS Sample ID: 13072314-001</b>			
<b>Matrix: SOIL</b>		<b>Date/Time Received: 07/23/2013 16:40</b>				<b>% Solids: 96</b>			
TCL Volatile Organic Compounds		Analytical Method: SW-846 8260 B				Preparation Method: 5030			
		<b>Result</b>	<b>Units</b>	<b>RL</b>	<b>Flag</b>	<b>Dil</b>	<b>Prepared</b>	<b>Analyzed</b>	<b>Analyst</b>
Dichlorodifluoromethane		ND	ug/kg	5.3	1	1	07/25/13	07/25/13 19:20	1011
Chloromethane		ND	ug/kg	5.3	1	1	07/25/13	07/25/13 19:20	1011
1,1,2-Trichloro-1,2,2-Trifluoroethane		ND	ug/kg	5.3	1	1	07/25/13	07/25/13 19:20	1011
Vinyl Chloride		ND	ug/kg	5.3	1	1	07/25/13	07/25/13 19:20	1011
Bromomethane		ND	ug/kg	5.3	1	1	07/25/13	07/25/13 19:20	1011
Chloroethane		ND	ug/kg	5.3	1	1	07/25/13	07/25/13 19:20	1011
Acetone		ND	ug/kg	21	1	1	07/25/13	07/25/13 19:20	1011
Cyclohexane		ND	ug/kg	21	1	1	07/25/13	07/25/13 19:20	1011
Trichlorofluoromethane		ND	ug/kg	5.3	1	1	07/25/13	07/25/13 19:20	1011
1,1-Dichloroethene		ND	ug/kg	5.3	1	1	07/25/13	07/25/13 19:20	1011
Methylene Chloride		ND	ug/kg	5.3	1	1	07/25/13	07/25/13 19:20	1011
trans-1,2-Dichloroethene		ND	ug/kg	5.3	1	1	07/25/13	07/25/13 19:20	1011
Methyl-t-butyl ether		ND	ug/kg	5.3	1	1	07/25/13	07/25/13 19:20	1011
1,1-Dichloroethane		ND	ug/kg	5.3	1	1	07/25/13	07/25/13 19:20	1011
2-Butanone (MEK)		ND	ug/kg	21	1	1	07/25/13	07/25/13 19:20	1011
cis-1,2-Dichloroethene		ND	ug/kg	5.3	1	1	07/25/13	07/25/13 19:20	1011
Bromochloromethane		ND	ug/kg	5.3	1	1	07/25/13	07/25/13 19:20	1011
Chloroform		ND	ug/kg	5.3	1	1	07/25/13	07/25/13 19:20	1011
1,1,1-Trichloroethane		ND	ug/kg	5.3	1	1	07/25/13	07/25/13 19:20	1011
1,2-Dichloroethane		ND	ug/kg	5.3	1	1	07/25/13	07/25/13 19:20	1011
Carbon Tetrachloride		ND	ug/kg	5.3	1	1	07/25/13	07/25/13 19:20	1011
Benzene		ND	ug/kg	5.3	1	1	07/25/13	07/25/13 19:20	1011
1,2-Dichloropropane		ND	ug/kg	5.3	1	1	07/25/13	07/25/13 19:20	1011
Carbon Disulfide		ND	ug/kg	11	1	1	07/25/13	07/25/13 19:20	1011
Methylcyclohexane		ND	ug/kg	21	1	1	07/25/13	07/25/13 19:20	1011
Trichloroethene		ND	ug/kg	5.3	1	1	07/25/13	07/25/13 19:20	1011
Methyl Acetate		ND	ug/kg	21	1	1	07/25/13	07/25/13 19:20	1011
Bromodichloromethane		ND	ug/kg	5.3	1	1	07/25/13	07/25/13 19:20	1011
cis-1,3-Dichloropropene		ND	ug/kg	5.3	1	1	07/25/13	07/25/13 19:20	1011
4-Methyl-2-Pantanone		ND	ug/kg	21	1	1	07/25/13	07/25/13 19:20	1011

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 13072314, 13072429, 13072601, 13072911, 13080206

**Whitman, Requardt & Associates, LLP., Fairfax, VA**

August 12, 2013

Project Name: Central Ave.

Project Location: Baltimore, MD

Project ID: 31576-007

<b>Sample ID: CAESB-2 8-10'</b>		<b>Date/Time Sampled: 07/22/2013 12:20</b>				<b>PSS Sample ID: 13072314-001</b>		
<b>Matrix: SOIL</b>		<b>Date/Time Received: 07/23/2013 16:40</b>				<b>% Solids: 96</b>		
TCL Volatile Organic Compounds		Analytical Method: SW-846 8260 B				Preparation Method: 5030		
		<b>Result</b>	<b>Units</b>	<b>RL</b>	<b>Flag</b>	<b>Dil</b>	<b>Prepared</b>	<b>Analyzed</b>
trans-1,3-Dichloropropene		ND	ug/kg	5.3		1	07/25/13	07/25/13 19:20
1,1,2-Trichloroethane		ND	ug/kg	5.3		1	07/25/13	07/25/13 19:20
Toluene		ND	ug/kg	5.3		1	07/25/13	07/25/13 19:20
2-Hexanone		ND	ug/kg	21		1	07/25/13	07/25/13 19:20
1,2-Dibromoethane (EDB)		ND	ug/kg	5.3		1	07/25/13	07/25/13 19:20
Dibromochloromethane		ND	ug/kg	5.3		1	07/25/13	07/25/13 19:20
Bromoform		ND	ug/kg	5.3		1	07/25/13	07/25/13 19:20
Tetrachloroethene		ND	ug/kg	5.3		1	07/25/13	07/25/13 19:20
Chlorobenzene		ND	ug/kg	5.3		1	07/25/13	07/25/13 19:20
Ethylbenzene		ND	ug/kg	5.3		1	07/25/13	07/25/13 19:20
m,p-Xylenes		ND	ug/kg	11		1	07/25/13	07/25/13 19:20
Styrene		ND	ug/kg	5.3		1	07/25/13	07/25/13 19:20
1,1,2,2-Tetrachloroethane		ND	ug/kg	5.3		1	07/25/13	07/25/13 19:20
o-Xylene		ND	ug/kg	5.3		1	07/25/13	07/25/13 19:20
Isopropylbenzene		ND	ug/kg	5.3		1	07/25/13	07/25/13 19:20
1,3-Dichlorobenzene		ND	ug/kg	5.3		1	07/25/13	07/25/13 19:20
1,4-Dichlorobenzene		ND	ug/kg	5.3		1	07/25/13	07/25/13 19:20
1,2-Dichlorobenzene		ND	ug/kg	5.3		1	07/25/13	07/25/13 19:20
1,2-Dibromo-3-Chloropropane		ND	ug/kg	42		1	07/25/13	07/25/13 19:20
1,2,4-Trichlorobenzene		ND	ug/kg	5.3		1	07/25/13	07/25/13 19:20
Naphthalene		ND	ug/kg	5.3		1	07/25/13	07/25/13 19:20
1,2,3-Trichlorobenzene		ND	ug/kg	5.3		1	07/25/13	07/25/13 19:20

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<b>Matrix: SOIL</b>		<b>Date/Time Received: 07/23/2013 16:40</b>			<b>% Solids: 96</b>		
TCL Semivolatile Organic Compounds		Analytical Method: SW-846 8270 C			Preparation Method: 3550		
		<b>Result</b>	<b>Units</b>	<b>RL</b>	<b>Flag</b>	<b>Dil</b>	<b>Prepared</b>
Acenaphthene		ND	ug/kg	170	1	1	07/26/13 07/26/13 14:05 1014
Acenaphthylene		ND	ug/kg	170	1	1	07/26/13 07/26/13 14:05 1014
Acetophenone		ND	ug/kg	170	1	1	07/26/13 07/26/13 14:05 1014
Anthracene		ND	ug/kg	170	1	1	07/26/13 07/26/13 14:05 1014
Benzo(a)anthracene		ND	ug/kg	170	1	1	07/26/13 07/26/13 14:05 1014
Benzo(a)pyrene		ND	ug/kg	170	1	1	07/26/13 07/26/13 14:05 1014
Benzo(b)fluoranthene		ND	ug/kg	170	1	1	07/26/13 07/26/13 14:05 1014
Benzo(g,h,i)perylene		ND	ug/kg	170	1	1	07/26/13 07/26/13 14:05 1014
Benzo(k)fluoranthene		ND	ug/kg	170	1	1	07/26/13 07/26/13 14:05 1014
Biphenyl (Diphenyl)		ND	ug/kg	170	1	1	07/26/13 07/26/13 14:05 1014
Butyl benzyl phthalate		ND	ug/kg	170	1	1	07/26/13 07/26/13 14:05 1014
bis(2-chloroethoxy) methane		ND	ug/kg	170	1	1	07/26/13 07/26/13 14:05 1014
bis(2-chloroethyl) ether		ND	ug/kg	170	1	1	07/26/13 07/26/13 14:05 1014
bis(2-chloroisopropyl) ether		ND	ug/kg	170	1	1	07/26/13 07/26/13 14:05 1014
bis(2-ethylhexyl) phthalate		ND	ug/kg	170	1	1	07/26/13 07/26/13 14:05 1014
4-Bromophenylphenyl ether		ND	ug/kg	170	1	1	07/26/13 07/26/13 14:05 1014
Di-n-butyl phthalate		ND	ug/kg	350	1	1	07/26/13 07/26/13 14:05 1014
Carbazole		ND	ug/kg	170	1	1	07/26/13 07/26/13 14:05 1014
4-Chloro-3-methyl phenol		ND	ug/kg	170	1	1	07/26/13 07/26/13 14:05 1014
4-Chloroaniline		ND	ug/kg	350	1	1	07/26/13 07/26/13 14:05 1014
2-Chloronaphthalene		ND	ug/kg	170	1	1	07/26/13 07/26/13 14:05 1014
2-Chlorophenol		ND	ug/kg	170	1	1	07/26/13 07/26/13 14:05 1014
4-Chlorophenyl Phenyl ether		ND	ug/kg	170	1	1	07/26/13 07/26/13 14:05 1014
Chrysene		ND	ug/kg	170	1	1	07/26/13 07/26/13 14:05 1014
Dibenz(a,h)Anthracene		ND	ug/kg	170	1	1	07/26/13 07/26/13 14:05 1014
Dibenzofuran		ND	ug/kg	170	1	1	07/26/13 07/26/13 14:05 1014
3,3-Dichlorobenzidine		ND	ug/kg	170	1	1	07/26/13 07/26/13 14:05 1014
2,4-Dichlorophenol		ND	ug/kg	170	1	1	07/26/13 07/26/13 14:05 1014
Diethyl phthalate		ND	ug/kg	170	1	1	07/26/13 07/26/13 14:05 1014
Dimethyl phthalate		ND	ug/kg	170	1	1	07/26/13 07/26/13 14:05 1014

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August 12, 2013

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Project Location: Baltimore, MD

Project ID: 31576-007

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<b>Matrix: SOIL</b>		<b>Date/Time Received: 07/23/2013 16:40</b>			<b>% Solids: 96</b>		
TCL Semivolatile Organic Compounds		Analytical Method: SW-846 8270 C			Preparation Method: 3550		
		<b>Result</b>	<b>Units</b>	<b>RL</b>	<b>Flag</b>	<b>Dil</b>	<b>Prepared</b>
2,4-Dimethylphenol		ND	ug/kg	170	1	1	07/26/13 07/26/13 14:05 1014
4,6-Dinitro-2-methyl phenol		ND	ug/kg	170	1	1	07/26/13 07/26/13 14:05 1014
2,4-Dinitrophenol		ND	ug/kg	350	1	1	07/26/13 07/26/13 14:05 1014
2,4-Dinitrotoluene		ND	ug/kg	170	1	1	07/26/13 07/26/13 14:05 1014
2,6-Dinitrotoluene		ND	ug/kg	170	1	1	07/26/13 07/26/13 14:05 1014
Fluoranthene		ND	ug/kg	170	1	1	07/26/13 07/26/13 14:05 1014
Fluorene		ND	ug/kg	170	1	1	07/26/13 07/26/13 14:05 1014
Hexachlorobenzene		ND	ug/kg	170	1	1	07/26/13 07/26/13 14:05 1014
Hexachlorobutadiene		ND	ug/kg	170	1	1	07/26/13 07/26/13 14:05 1014
Hexachlorocyclopentadiene		ND	ug/kg	170	1	1	07/26/13 07/26/13 14:05 1014
Hexachloroethane		ND	ug/kg	170	1	1	07/26/13 07/26/13 14:05 1014
Indeno(1,2,3-c,d)Pyrene		ND	ug/kg	170	1	1	07/26/13 07/26/13 14:05 1014
Isophorone		ND	ug/kg	170	1	1	07/26/13 07/26/13 14:05 1014
2-Methylnaphthalene		ND	ug/kg	170	1	1	07/26/13 07/26/13 14:05 1014
2-Methyl phenol		ND	ug/kg	170	1	1	07/26/13 07/26/13 14:05 1014
3&4-Methylphenol		ND	ug/kg	170	1	1	07/26/13 07/26/13 14:05 1014
Naphthalene		ND	ug/kg	170	1	1	07/26/13 07/26/13 14:05 1014
4-Nitroaniline		ND	ug/kg	170	1	1	07/26/13 07/26/13 14:05 1014
3-Nitroaniline		ND	ug/kg	170	1	1	07/26/13 07/26/13 14:05 1014
2-Nitroaniline		ND	ug/kg	350	1	1	07/26/13 07/26/13 14:05 1014
Nitrobenzene		ND	ug/kg	170	1	1	07/26/13 07/26/13 14:05 1014
2-Nitrophenol		ND	ug/kg	170	1	1	07/26/13 07/26/13 14:05 1014
4-Nitrophenol		ND	ug/kg	170	1	1	07/26/13 07/26/13 14:05 1014
N-Nitrosodi-n-propyl amine		ND	ug/kg	170	1	1	07/26/13 07/26/13 14:05 1014
N-Nitrosodiphenylamine		ND	ug/kg	170	1	1	07/26/13 07/26/13 14:05 1014
Di-n-octyl phthalate		ND	ug/kg	170	1	1	07/26/13 07/26/13 14:05 1014
Pentachlorophenol		ND	ug/kg	350	1	1	07/26/13 07/26/13 14:05 1014
Phenanthrene		ND	ug/kg	170	1	1	07/26/13 07/26/13 14:05 1014
Phenol		ND	ug/kg	170	1	1	07/26/13 07/26/13 14:05 1014
Atrazine		ND	ug/kg	170	1	1	07/26/13 07/26/13 14:05 1014

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**FAX 410-788-8723**

# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 13072314, 13072429, 13072601, 13072911, 13080206

**Whitman, Requardt & Associates, LLP., Fairfax, VA**

August 12, 2013

Project Name: Central Ave.

Project Location: Baltimore, MD

Project ID: 31576-007

<b>Sample ID: CAESB-2 8-10'</b>	<b>Date/Time Sampled: 07/22/2013 12:20</b>					<b>PSS Sample ID: 13072314-001</b>		
<b>Matrix: SOIL</b>	<b>Date/Time Received: 07/23/2013 16:40</b>					<b>% Solids: 96</b>		
TCL Semivolatile Organic Compounds	Analytical Method: SW-846 8270 C					Preparation Method: 3550		
	<b>Result</b>	<b>Units</b>	<b>RL</b>	<b>Flag</b>	<b>Dil</b>	<b>Prepared</b>	<b>Analyzed</b>	<b>Analyst</b>
Pyrene	ND	ug/kg	170	1		07/26/13	07/26/13 14:05	1014
Pyridine	ND	ug/kg	170	1		07/26/13	07/26/13 14:05	1014
Caprolactam	ND	ug/kg	170	1		07/26/13	07/26/13 14:05	1014
2,4,6-Trichlorophenol	ND	ug/kg	170	1		07/26/13	07/26/13 14:05	1014
2,4,5-Trichlorophenol	ND	ug/kg	170	1		07/26/13	07/26/13 14:05	1014
<b>Sample ID: CAESB-2 2-10'</b>	<b>Date/Time Sampled: 07/22/2013 12:20</b>					<b>PSS Sample ID: 13072314-002</b>		
<b>Matrix: SOIL</b>	<b>Date/Time Received: 07/23/2013 16:40</b>					<b>% Solids: 88</b>		
PP Metals	Analytical Method: SW-846 6020 A					Preparation Method: 3050B		
	<b>Result</b>	<b>Units</b>	<b>RL</b>	<b>Flag</b>	<b>Dil</b>	<b>Prepared</b>	<b>Analyzed</b>	<b>Analyst</b>
Antimony	ND	mg/kg	2.6	1		07/26/13	07/29/13 15:28	1034
Arsenic	4.5	mg/kg	0.52	1		07/26/13	07/29/13 15:28	1034
Beryllium	ND	mg/kg	2.3	1		07/26/13	07/30/13 14:18	1034
Cadmium	ND	mg/kg	2.6	1		07/26/13	07/29/13 15:28	1034
Chromium	22	mg/kg	2.6	1		07/26/13	07/29/13 15:28	1034
Copper	18	mg/kg	2.6	1		07/26/13	07/29/13 15:28	1034
Lead	50	mg/kg	2.6	1		07/26/13	07/29/13 15:28	1034
Mercury	0.25	mg/kg	0.10	1		07/26/13	07/29/13 15:28	1034
Nickel	12	mg/kg	2.6	1		07/26/13	07/29/13 15:28	1034
Selenium	ND	mg/kg	2.6	1		07/26/13	07/29/13 15:28	1034
Silver	ND	mg/kg	2.6	1		07/26/13	07/29/13 15:28	1034
Thallium	ND	mg/kg	2.1	1		07/26/13	07/29/13 15:28	1034
Zinc	27	mg/kg	10	1		07/26/13	07/29/13 15:28	1034

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## CERTIFICATE OF ANALYSIS

No: 13072314, 13072429, 13072601, 13072911, 13080206

**Whitman, Requardt & Associates, LLP., Fairfax, VA**

August 12, 2013

Project Name: Central Ave.

Project Location: Baltimore, MD

Project ID: 31576-007

<b>Sample ID: CAESB-2 10-20</b>	<b>Date/Time Sampled: 07/22/2013 12:20</b>				<b>PSS Sample ID: 13072314-003</b>			
<b>Matrix: SOIL</b>	<b>Date/Time Received: 07/23/2013 16:40</b>				<b>% Solids: 80</b>			
PP Metals	Analytical Method: SW-846 6020 A				Preparation Method: 3050B			
	<b>Result</b>	<b>Units</b>	<b>RL</b>	<b>Flag</b>	<b>Dil</b>	<b>Prepared</b>	<b>Analyzed</b>	<b>Analyst</b>
Antimony	ND	mg/kg	3.0	1		07/26/13	07/29/13 15:58	1034
Arsenic	<b>3.4</b>	mg/kg	0.59	1		07/26/13	07/29/13 15:58	1034
Beryllium	ND	mg/kg	2.4	1		07/26/13	07/30/13 14:24	1034
Cadmium	ND	mg/kg	3.0	1		07/26/13	07/29/13 15:58	1034
Chromium	<b>33</b>	mg/kg	3.0	1		07/26/13	07/29/13 15:58	1034
Copper	<b>23</b>	mg/kg	3.0	1		07/26/13	07/29/13 15:58	1034
Lead	<b>77</b>	mg/kg	3.0	1		07/26/13	07/29/13 15:58	1034
Mercury	<b>0.42</b>	mg/kg	0.12	1		07/26/13	07/29/13 15:58	1034
Nickel	<b>17</b>	mg/kg	3.0	1		07/26/13	07/29/13 15:58	1034
Selenium	ND	mg/kg	3.0	1		07/26/13	07/29/13 15:58	1034
Silver	ND	mg/kg	3.0	1		07/26/13	07/29/13 15:58	1034
Thallium	ND	mg/kg	2.4	1		07/26/13	07/29/13 15:58	1034
Zinc	<b>34</b>	mg/kg	12	1		07/26/13	07/29/13 15:58	1034

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**Whitman, Requardt & Associates, LLP., Fairfax, VA**

August 12, 2013

Project Name: Central Ave.

Project Location: Baltimore, MD

Project ID: 31576-007

<b>Sample ID: CAESB-3 8-10'</b>	<b>Date/Time Sampled: 07/22/2013 15:00</b>			<b>PSS Sample ID: 13072314-004</b>				
<b>Matrix: SOIL</b>	<b>Date/Time Received: 07/23/2013 16:40</b>			<b>% Solids: 83</b>				
Total Petroleum Hydrocarbons - DRO	Analytical Method: SW-846 8015 C			Preparation Method: 3550				
	<b>Result</b>	<b>Units</b>	<b>RL</b>	<b>Flag</b>	<b>Dil</b>	<b>Prepared</b>	<b>Analyzed</b>	<b>Analyst</b>
TPH-DRO (Diesel Range Organics)	ND	mg/kg	4.8		1	07/25/13	07/26/13 10:54	1040
Total Petroleum Hydrocarbons-GRO	Analytical Method: SW-846 8015C			Preparation Method: 5030				
	<b>Result</b>	<b>Units</b>	<b>RL</b>	<b>Flag</b>	<b>Dil</b>	<b>Prepared</b>	<b>Analyzed</b>	<b>Analyst</b>
TPH-GRO (Gasoline Range Organics)	ND	ug/kg	120		1	07/24/13	07/24/13 17:38	1035

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August 12, 2013

Project Name: Central Ave.

Project Location: Baltimore, MD

Project ID: 31576-007

<b>Sample ID: CAESB-3 8-10'</b>		<b>Date/Time Sampled: 07/22/2013 15:00</b>				<b>PSS Sample ID: 13072314-004</b>		
<b>Matrix: SOIL</b>		<b>Date/Time Received: 07/23/2013 16:40</b>				<b>% Solids: 83</b>		
TCL Volatile Organic Compounds		Analytical Method: SW-846 8260 B				Preparation Method: 5030		
		<b>Result</b>	<b>Units</b>	<b>RL</b>	<b>Flag</b>	<b>Dil</b>	<b>Prepared</b>	<b>Analyzed</b>
Dichlorodifluoromethane		ND	ug/kg	6.0	1	1	07/25/13	07/25/13 19:47
Chloromethane		ND	ug/kg	6.0	1	1	07/25/13	07/25/13 19:47
1,1,2-Trichloro-1,2,2-Trifluoroethane		ND	ug/kg	6.0	1	1	07/25/13	07/25/13 19:47
Vinyl Chloride		ND	ug/kg	6.0	1	1	07/25/13	07/25/13 19:47
Bromomethane		ND	ug/kg	6.0	1	1	07/25/13	07/25/13 19:47
Chloroethane		ND	ug/kg	6.0	1	1	07/25/13	07/25/13 19:47
Acetone		ND	ug/kg	24	1	1	07/25/13	07/25/13 19:47
Cyclohexane		ND	ug/kg	24	1	1	07/25/13	07/25/13 19:47
Trichlorofluoromethane		ND	ug/kg	6.0	1	1	07/25/13	07/25/13 19:47
1,1-Dichloroethene		ND	ug/kg	6.0	1	1	07/25/13	07/25/13 19:47
Methylene Chloride		ND	ug/kg	6.0	1	1	07/25/13	07/25/13 19:47
trans-1,2-Dichloroethene		ND	ug/kg	6.0	1	1	07/25/13	07/25/13 19:47
Methyl-t-butyl ether		ND	ug/kg	6.0	1	1	07/25/13	07/25/13 19:47
1,1-Dichloroethane		ND	ug/kg	6.0	1	1	07/25/13	07/25/13 19:47
2-Butanone (MEK)		ND	ug/kg	24	1	1	07/25/13	07/25/13 19:47
cis-1,2-Dichloroethene		ND	ug/kg	6.0	1	1	07/25/13	07/25/13 19:47
Bromochloromethane		ND	ug/kg	6.0	1	1	07/25/13	07/25/13 19:47
Chloroform		ND	ug/kg	6.0	1	1	07/25/13	07/25/13 19:47
1,1,1-Trichloroethane		ND	ug/kg	6.0	1	1	07/25/13	07/25/13 19:47
1,2-Dichloroethane		ND	ug/kg	6.0	1	1	07/25/13	07/25/13 19:47
Carbon Tetrachloride		ND	ug/kg	6.0	1	1	07/25/13	07/25/13 19:47
Benzene		ND	ug/kg	6.0	1	1	07/25/13	07/25/13 19:47
1,2-Dichloropropane		ND	ug/kg	6.0	1	1	07/25/13	07/25/13 19:47
Carbon Disulfide		ND	ug/kg	12	1	1	07/25/13	07/25/13 19:47
Methylcyclohexane		ND	ug/kg	24	1	1	07/25/13	07/25/13 19:47
Trichloroethene		ND	ug/kg	6.0	1	1	07/25/13	07/25/13 19:47
Methyl Acetate		ND	ug/kg	24	1	1	07/25/13	07/25/13 19:47
Bromodichloromethane		ND	ug/kg	6.0	1	1	07/25/13	07/25/13 19:47
cis-1,3-Dichloropropene		ND	ug/kg	6.0	1	1	07/25/13	07/25/13 19:47
4-Methyl-2-Pantanone		ND	ug/kg	24	1	1	07/25/13	07/25/13 19:47

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No: 13072314, 13072429, 13072601, 13072911, 13080206

**Whitman, Requardt & Associates, LLP., Fairfax, VA**

August 12, 2013

Project Name: Central Ave.

Project Location: Baltimore, MD

Project ID: 31576-007

Sample ID: CAESB-3 8-10'	Date/Time Sampled: 07/22/2013 15:00				PSS Sample ID: 13072314-004			
Matrix: SOIL	Date/Time Received: 07/23/2013 16:40				% Solids: 83			
TCL Volatile Organic Compounds	Analytical Method: SW-846 8260 B				Preparation Method: 5030			
	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
trans-1,3-Dichloropropene	ND	ug/kg	6.0	1		07/25/13	07/25/13 19:47	1011
1,1,2-Trichloroethane	ND	ug/kg	6.0	1		07/25/13	07/25/13 19:47	1011
Toluene	ND	ug/kg	6.0	1		07/25/13	07/25/13 19:47	1011
2-Hexanone	ND	ug/kg	24	1		07/25/13	07/25/13 19:47	1011
1,2-Dibromoethane (EDB)	ND	ug/kg	6.0	1		07/25/13	07/25/13 19:47	1011
Dibromochloromethane	ND	ug/kg	6.0	1		07/25/13	07/25/13 19:47	1011
Bromoform	ND	ug/kg	6.0	1		07/25/13	07/25/13 19:47	1011
Tetrachloroethene	ND	ug/kg	6.0	1		07/25/13	07/25/13 19:47	1011
Chlorobenzene	ND	ug/kg	6.0	1		07/25/13	07/25/13 19:47	1011
Ethylbenzene	ND	ug/kg	6.0	1		07/25/13	07/25/13 19:47	1011
m,p-Xylenes	ND	ug/kg	12	1		07/25/13	07/25/13 19:47	1011
Styrene	ND	ug/kg	6.0	1		07/25/13	07/25/13 19:47	1011
1,1,2,2-Tetrachloroethane	ND	ug/kg	6.0	1		07/25/13	07/25/13 19:47	1011
o-Xylene	ND	ug/kg	6.0	1		07/25/13	07/25/13 19:47	1011
Isopropylbenzene	ND	ug/kg	6.0	1		07/25/13	07/25/13 19:47	1011
1,3-Dichlorobenzene	ND	ug/kg	6.0	1		07/25/13	07/25/13 19:47	1011
1,4-Dichlorobenzene	ND	ug/kg	6.0	1		07/25/13	07/25/13 19:47	1011
1,2-Dichlorobenzene	ND	ug/kg	6.0	1		07/25/13	07/25/13 19:47	1011
1,2-Dibromo-3-Chloropropane	ND	ug/kg	48	1		07/25/13	07/25/13 19:47	1011
1,2,4-Trichlorobenzene	ND	ug/kg	6.0	1		07/25/13	07/25/13 19:47	1011
Naphthalene	ND	ug/kg	6.0	1		07/25/13	07/25/13 19:47	1011
1,2,3-Trichlorobenzene	ND	ug/kg	6.0	1		07/25/13	07/25/13 19:47	1011

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<b>Matrix: SOIL</b>		<b>Date/Time Received: 07/23/2013 16:40</b>			<b>% Solids: 83</b>		
TCL Semivolatile Organic Compounds		Analytical Method: SW-846 8270 C			Preparation Method: 3550		
		<b>Result</b>	<b>Units</b>	<b>RL</b>	<b>Flag</b>	<b>Dil</b>	<b>Prepared</b>
Acenaphthene		ND	ug/kg	200	1	1	07/26/13 07/26/13 14:34 1014
Acenaphthylene		ND	ug/kg	200	1	1	07/26/13 07/26/13 14:34 1014
Acetophenone		ND	ug/kg	200	1	1	07/26/13 07/26/13 14:34 1014
Anthracene		ND	ug/kg	200	1	1	07/26/13 07/26/13 14:34 1014
Benzo(a)anthracene		ND	ug/kg	200	1	1	07/26/13 07/26/13 14:34 1014
Benzo(a)pyrene		ND	ug/kg	200	1	1	07/26/13 07/26/13 14:34 1014
Benzo(b)fluoranthene		ND	ug/kg	200	1	1	07/26/13 07/26/13 14:34 1014
Benzo(g,h,i)perylene		ND	ug/kg	200	1	1	07/26/13 07/26/13 14:34 1014
Benzo(k)fluoranthene		ND	ug/kg	200	1	1	07/26/13 07/26/13 14:34 1014
Biphenyl (Diphenyl)		ND	ug/kg	200	1	1	07/26/13 07/26/13 14:34 1014
Butyl benzyl phthalate		ND	ug/kg	200	1	1	07/26/13 07/26/13 14:34 1014
bis(2-chloroethoxy) methane		ND	ug/kg	200	1	1	07/26/13 07/26/13 14:34 1014
bis(2-chloroethyl) ether		ND	ug/kg	200	1	1	07/26/13 07/26/13 14:34 1014
bis(2-chloroisopropyl) ether		ND	ug/kg	200	1	1	07/26/13 07/26/13 14:34 1014
bis(2-ethylhexyl) phthalate		220	ug/kg	200	1	1	07/26/13 07/26/13 14:34 1014
4-Bromophenylphenyl ether		ND	ug/kg	200	1	1	07/26/13 07/26/13 14:34 1014
Di-n-butyl phthalate		ND	ug/kg	400	1	1	07/26/13 07/26/13 14:34 1014
Carbazole		ND	ug/kg	200	1	1	07/26/13 07/26/13 14:34 1014
4-Chloro-3-methyl phenol		ND	ug/kg	200	1	1	07/26/13 07/26/13 14:34 1014
4-Chloroaniline		ND	ug/kg	400	1	1	07/26/13 07/26/13 14:34 1014
2-Chloronaphthalene		ND	ug/kg	200	1	1	07/26/13 07/26/13 14:34 1014
2-Chlorophenol		ND	ug/kg	200	1	1	07/26/13 07/26/13 14:34 1014
4-Chlorophenyl Phenyl ether		ND	ug/kg	200	1	1	07/26/13 07/26/13 14:34 1014
Chrysene		ND	ug/kg	200	1	1	07/26/13 07/26/13 14:34 1014
Dibenz(a,h)Anthracene		ND	ug/kg	200	1	1	07/26/13 07/26/13 14:34 1014
Dibenzofuran		ND	ug/kg	200	1	1	07/26/13 07/26/13 14:34 1014
3,3-Dichlorobenzidine		ND	ug/kg	200	1	1	07/26/13 07/26/13 14:34 1014
2,4-Dichlorophenol		ND	ug/kg	200	1	1	07/26/13 07/26/13 14:34 1014
Diethyl phthalate		ND	ug/kg	200	1	1	07/26/13 07/26/13 14:34 1014
Dimethyl phthalate		ND	ug/kg	200	1	1	07/26/13 07/26/13 14:34 1014

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August 12, 2013

Project Name: Central Ave.

Project Location: Baltimore, MD

Project ID: 31576-007

<b>Sample ID: CAESB-3 8-10'</b>		<b>Date/Time Sampled: 07/22/2013 15:00</b>			<b>PSS Sample ID: 13072314-004</b>		
<b>Matrix: SOIL</b>		<b>Date/Time Received: 07/23/2013 16:40</b>			<b>% Solids: 83</b>		
TCL Semivolatile Organic Compounds		Analytical Method: SW-846 8270 C			Preparation Method: 3550		
		<b>Result</b>	<b>Units</b>	<b>RL</b>	<b>Flag</b>	<b>Dil</b>	<b>Prepared</b>
2,4-Dimethylphenol		ND	ug/kg	200	1	1	07/26/13 07/26/13 14:34
4,6-Dinitro-2-methyl phenol		ND	ug/kg	200	1	1	07/26/13 07/26/13 14:34
2,4-Dinitrophenol		ND	ug/kg	400	1	1	07/26/13 07/26/13 14:34
2,4-Dinitrotoluene		ND	ug/kg	200	1	1	07/26/13 07/26/13 14:34
2,6-Dinitrotoluene		ND	ug/kg	200	1	1	07/26/13 07/26/13 14:34
Fluoranthene		ND	ug/kg	200	1	1	07/26/13 07/26/13 14:34
Fluorene		ND	ug/kg	200	1	1	07/26/13 07/26/13 14:34
Hexachlorobenzene		ND	ug/kg	200	1	1	07/26/13 07/26/13 14:34
Hexachlorobutadiene		ND	ug/kg	200	1	1	07/26/13 07/26/13 14:34
Hexachlorocyclopentadiene		ND	ug/kg	200	1	1	07/26/13 07/26/13 14:34
Hexachloroethane		ND	ug/kg	200	1	1	07/26/13 07/26/13 14:34
Indeno(1,2,3-c,d)Pyrene		ND	ug/kg	200	1	1	07/26/13 07/26/13 14:34
Isophorone		ND	ug/kg	200	1	1	07/26/13 07/26/13 14:34
2-Methylnaphthalene		ND	ug/kg	200	1	1	07/26/13 07/26/13 14:34
2-Methyl phenol		ND	ug/kg	200	1	1	07/26/13 07/26/13 14:34
3&4-Methylphenol		ND	ug/kg	200	1	1	07/26/13 07/26/13 14:34
Naphthalene		ND	ug/kg	200	1	1	07/26/13 07/26/13 14:34
4-Nitroaniline		ND	ug/kg	200	1	1	07/26/13 07/26/13 14:34
3-Nitroaniline		ND	ug/kg	200	1	1	07/26/13 07/26/13 14:34
2-Nitroaniline		ND	ug/kg	400	1	1	07/26/13 07/26/13 14:34
Nitrobenzene		ND	ug/kg	200	1	1	07/26/13 07/26/13 14:34
2-Nitrophenol		ND	ug/kg	200	1	1	07/26/13 07/26/13 14:34
4-Nitrophenol		ND	ug/kg	200	1	1	07/26/13 07/26/13 14:34
N-Nitrosodi-n-propyl amine		ND	ug/kg	200	1	1	07/26/13 07/26/13 14:34
N-Nitrosodiphenylamine		ND	ug/kg	200	1	1	07/26/13 07/26/13 14:34
Di-n-octyl phthalate		ND	ug/kg	200	1	1	07/26/13 07/26/13 14:34
Pentachlorophenol		ND	ug/kg	400	1	1	07/26/13 07/26/13 14:34
Phenanthrene		ND	ug/kg	200	1	1	07/26/13 07/26/13 14:34
Phenol		ND	ug/kg	200	1	1	07/26/13 07/26/13 14:34
Atrazine		ND	ug/kg	200	1	1	07/26/13 07/26/13 14:34

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 13072314, 13072429, 13072601, 13072911, 13080206

**Whitman, Requardt & Associates, LLP., Fairfax, VA**

August 12, 2013

Project Name: Central Ave.

Project Location: Baltimore, MD

Project ID: 31576-007

<b>Sample ID: CAESB-3 8-10'</b>	<b>Date/Time Sampled: 07/22/2013 15:00 PSS Sample ID: 13072314-004</b>						
<b>Matrix: SOIL</b>	<b>Date/Time Received: 07/23/2013 16:40 % Solids: 83</b>						
TCL Semivolatile Organic Compounds	Analytical Method: SW-846 8270 C			Preparation Method: 3550			
	<b>Result</b>	<b>Units</b>	<b>RL</b>	<b>Flag</b>	<b>Dil</b>	<b>Prepared</b>	<b>Analyzed</b>
Pyrene	ND	ug/kg	200	1	1	07/26/13	07/26/13 14:34 1014
Pyridine	ND	ug/kg	200	1	1	07/26/13	07/26/13 14:34 1014
Caprolactam	ND	ug/kg	200	1	1	07/26/13	07/26/13 14:34 1014
2,4,6-Trichlorophenol	ND	ug/kg	200	1	1	07/26/13	07/26/13 14:34 1014
2,4,5-Trichlorophenol	ND	ug/kg	200	1	1	07/26/13	07/26/13 14:34 1014
<b>Sample ID: CAESB-3 2-10'</b>	<b>Date/Time Sampled: 07/22/2013 15:00 PSS Sample ID: 13072314-005</b>						
<b>Matrix: SOIL</b>	<b>Date/Time Received: 07/23/2013 16:40 % Solids: 89</b>						
PP Metals	Analytical Method: SW-846 6020 A			Preparation Method: 3050B			
	<b>Result</b>	<b>Units</b>	<b>RL</b>	<b>Flag</b>	<b>Dil</b>	<b>Prepared</b>	<b>Analyzed</b>
Antimony	ND	mg/kg	2.4	1	1	07/26/13	07/29/13 16:04 1034
Arsenic	2.4	mg/kg	0.48	1	1	07/26/13	07/29/13 16:04 1034
Beryllium	ND	mg/kg	2.1	1	1	07/26/13	07/30/13 15:02 1034
Cadmium	ND	mg/kg	2.4	1	1	07/26/13	07/29/13 16:04 1034
Chromium	43	mg/kg	2.4	1	1	07/26/13	07/29/13 16:04 1034
Copper	12	mg/kg	2.4	1	1	07/26/13	07/29/13 16:04 1034
Lead	4.9	mg/kg	2.4	1	1	07/26/13	07/29/13 16:04 1034
Mercury	ND	mg/kg	0.096	1	1	07/26/13	07/29/13 16:04 1034
Nickel	17	mg/kg	2.4	1	1	07/26/13	07/29/13 16:04 1034
Selenium	ND	mg/kg	2.4	1	1	07/26/13	07/29/13 16:04 1034
Silver	ND	mg/kg	2.4	1	1	07/26/13	07/29/13 16:04 1034
Thallium	ND	mg/kg	1.9	1	1	07/26/13	07/29/13 16:04 1034
Zinc	36	mg/kg	9.6	1	1	07/26/13	07/29/13 16:04 1034

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 13072314, 13072429, 13072601, 13072911, 13080206

**Whitman, Requardt & Associates, LLP., Fairfax, VA**

August 12, 2013

Project Name: Central Ave.

Project Location: Baltimore, MD

Project ID: 31576-007

<b>Sample ID: CAESB-3 10-20'</b>	<b>Date/Time Sampled: 07/22/2013 15:00</b>				<b>PSS Sample ID: 13072314-006</b>			
<b>Matrix: SOIL</b>	<b>Date/Time Received: 07/23/2013 16:40</b>				<b>% Solids: 76</b>			
PP Metals	Analytical Method: SW-846 6020 A				Preparation Method: 3050B			
	<b>Result</b>	<b>Units</b>	<b>RL</b>	<b>Flag</b>	<b>Dil</b>	<b>Prepared</b>	<b>Analyzed</b>	<b>Analyst</b>
Antimony	ND	mg/kg	3.0	1		07/26/13	07/29/13 16:37	1034
Arsenic	<b>1.2</b>	mg/kg	0.59	1		07/26/13	07/29/13 16:37	1034
Beryllium	ND	mg/kg	2.2	1		07/26/13	07/30/13 15:08	1034
Cadmium	ND	mg/kg	3.0	1		07/26/13	07/29/13 16:37	1034
Chromium	<b>80</b>	mg/kg	3.0	1		07/26/13	07/29/13 16:37	1034
Copper	<b>32</b>	mg/kg	3.0	1		07/26/13	07/29/13 16:37	1034
Lead	<b>10</b>	mg/kg	3.0	1		07/26/13	07/29/13 16:37	1034
Mercury	ND	mg/kg	0.12	1		07/26/13	07/29/13 16:37	1034
Nickel	<b>41</b>	mg/kg	3.0	1		07/26/13	07/29/13 16:37	1034
Selenium	ND	mg/kg	3.0	1		07/26/13	07/29/13 16:37	1034
Silver	ND	mg/kg	3.0	1		07/26/13	07/29/13 16:37	1034
Thallium	ND	mg/kg	2.4	1		07/26/13	07/29/13 16:37	1034
Zinc	<b>71</b>	mg/kg	12	1		07/26/13	07/29/13 16:37	1034

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 13072314, 13072429, 13072601, 13072911, 13080206

**Whitman, Requardt & Associates, LLP., Fairfax, VA**

August 12, 2013

Project Name: Central Ave.

Project Location: Baltimore, MD

Project ID: 31576-007

<b>Sample ID: CAESB-2</b>	<b>Date/Time Sampled: 07/23/2013 08:30 PSS Sample ID: 13072314-007</b>							
<b>Matrix: GROUND WATER</b>	<b>Date/Time Received: 07/23/2013 16:40</b>							
Dissolved PP Metals	Analytical Method: SW-846 6020 A				Preparation Method: 3005A			
	<b>Result</b>	<b>Units</b>	<b>RL</b>	<b>Flag</b>	<b>Dil</b>	<b>Prepared</b>	<b>Analyzed</b>	<b>Analyst</b>
Antimony	ND	ug/L	5.0	1		07/29/13	07/29/13 15:50	1033
Arsenic	ND	ug/L	1.0	1		07/29/13	07/29/13 15:50	1033
Beryllium	ND	ug/L	1.0	1		07/29/13	07/31/13 14:22	1033
Cadmium	ND	ug/L	1.0	1		07/29/13	07/29/13 15:50	1033
Chromium	ND	ug/L	1.0	1		07/29/13	07/31/13 14:22	1033
Copper	ND	ug/L	1.0	1		07/29/13	07/31/13 14:22	1033
Lead	ND	ug/L	1.0	1		07/29/13	07/29/13 15:50	1033
Mercury	ND	ug/L	0.20	1		07/29/13	07/29/13 15:50	1033
Nickel	<b>3.8</b>	ug/L	1.0	1		07/29/13	07/31/13 14:22	1033
Selenium	ND	ug/L	1.0	1		07/29/13	07/29/13 15:50	1033
Silver	ND	ug/L	1.0	1		07/29/13	07/29/13 15:50	1033
Thallium	ND	ug/L	1.0	1		07/29/13	07/29/13 15:50	1033
Zinc	ND	ug/L	20	1		07/29/13	07/29/13 15:50	1033
Total Petroleum Hydrocarbons - DRO	Analytical Method: SW-846 8015 C				Preparation Method: 3510C			
	<b>Result</b>	<b>Units</b>	<b>RL</b>	<b>Flag</b>	<b>Dil</b>	<b>Prepared</b>	<b>Analyzed</b>	<b>Analyst</b>
TPH-DRO (Diesel Range Organics)	<b>0.11</b>	mg/L	0.10	1		07/26/13	07/26/13 12:48	1040
Total Petroleum Hydrocarbons-GRO	Analytical Method: SW-846 8015C				Preparation Method: 5030B			
	<b>Result</b>	<b>Units</b>	<b>RL</b>	<b>Flag</b>	<b>Dil</b>	<b>Prepared</b>	<b>Analyzed</b>	<b>Analyst</b>
TPH-GRO (Gasoline Range Organics)	ND	ug/L	100	1		07/24/13	07/24/13 13:14	1035

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 13072314, 13072429, 13072601, 13072911, 13080206

**Whitman, Requardt & Associates, LLP., Fairfax, VA**

August 12, 2013

Project Name: Central Ave.

Project Location: Baltimore, MD

Project ID: 31576-007

Sample ID: CAESB-2	Date/Time Sampled: 07/23/2013 08:30 PSS Sample ID: 13072314-007					
Matrix: GROUND WATER	Date/Time Received: 07/23/2013 16:40					
TCL Volatile Organic Compounds	Analytical Method: SW-846 8260 B			Preparation Method: 5030B		
	Result	Units	RL	Flag	Dil	Prepared Analyzed Analyst
Dichlorodifluoromethane	ND	ug/L	1.0	1	1	07/30/13 07/30/13 16:13 1011
Chloromethane	ND	ug/L	1.0	1	1	07/30/13 07/30/13 16:13 1011
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	ug/L	1.0	1	1	07/30/13 07/30/13 16:13 1011
Vinyl Chloride	ND	ug/L	1.0	1	1	07/30/13 07/30/13 16:13 1011
Bromomethane	ND	ug/L	1.0	1	1	07/30/13 07/30/13 16:13 1011
Chloroethane	ND	ug/L	1.0	1	1	07/30/13 07/30/13 16:13 1011
Acetone	24	ug/L	10	1	1	07/30/13 07/30/13 16:13 1011
Cyclohexane	ND	ug/L	10	1	1	07/30/13 07/30/13 16:13 1011
Trichlorofluoromethane	ND	ug/L	5.0	1	1	07/30/13 07/30/13 16:13 1011
1,1-Dichloroethene	ND	ug/L	1.0	1	1	07/30/13 07/30/13 16:13 1011
Methylene Chloride	ND	ug/L	1.0	1	1	07/30/13 07/30/13 16:13 1011
trans-1,2-Dichloroethene	ND	ug/L	1.0	1	1	07/30/13 07/30/13 16:13 1011
Methyl-t-butyl ether	ND	ug/L	1.0	1	1	07/30/13 07/30/13 16:13 1011
1,1-Dichloroethane	ND	ug/L	1.0	1	1	07/30/13 07/30/13 16:13 1011
2-Butanone (MEK)	ND	ug/L	10	1	1	07/30/13 07/30/13 16:13 1011
cis-1,2-Dichloroethene	ND	ug/L	1.0	1	1	07/30/13 07/30/13 16:13 1011
Bromochloromethane	ND	ug/L	1.0	1	1	07/30/13 07/30/13 16:13 1011
Chloroform	ND	ug/L	1.0	1	1	07/30/13 07/30/13 16:13 1011
1,1,1-Trichloroethane	ND	ug/L	1.0	1	1	07/30/13 07/30/13 16:13 1011
1,2-Dichloroethane	ND	ug/L	1.0	1	1	07/30/13 07/30/13 16:13 1011
Carbon Tetrachloride	ND	ug/L	1.0	1	1	07/30/13 07/30/13 16:13 1011
Benzene	ND	ug/L	1.0	1	1	07/30/13 07/30/13 16:13 1011
1,2-Dichloropropane	ND	ug/L	1.0	1	1	07/30/13 07/30/13 16:13 1011
Methyl Acetate	ND	ug/L	10	1	1	07/30/13 07/30/13 16:13 1011
Methylcyclohexane	ND	ug/L	10	1	1	07/30/13 07/30/13 16:13 1011
Trichloroethene	ND	ug/L	1.0	1	1	07/30/13 07/30/13 16:13 1011
Carbon Disulfide	ND	ug/L	10	1	1	07/30/13 07/30/13 16:13 1011
Bromodichloromethane	ND	ug/L	1.0	1	1	07/30/13 07/30/13 16:13 1011
cis-1,3-Dichloropropene	ND	ug/L	1.0	1	1	07/30/13 07/30/13 16:13 1011
4-Methyl-2-Pantanone	ND	ug/L	5.0	1	1	07/30/13 07/30/13 16:13 1011

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 13072314, 13072429, 13072601, 13072911, 13080206

**Whitman, Requardt & Associates, LLP., Fairfax, VA**

August 12, 2013

Project Name: Central Ave.

Project Location: Baltimore, MD

Project ID: 31576-007

Sample ID: CAESB-2	Date/Time Sampled: 07/23/2013 08:30 PSS Sample ID: 13072314-007					
Matrix: GROUND WATER	Date/Time Received: 07/23/2013 16:40					
TCL Volatile Organic Compounds	Analytical Method: SW-846 8260 B			Preparation Method: 5030B		
	Result	Units	RL	Flag	Dil	Prepared Analyzed Analyst
trans-1,3-Dichloropropene	ND	ug/L	1.0	1	1	07/30/13 07/30/13 16:13 1011
1,1,2-Trichloroethane	ND	ug/L	1.0	1	1	07/30/13 07/30/13 16:13 1011
Toluene	ND	ug/L	1.0	1	1	07/30/13 07/30/13 16:13 1011
2-Hexanone	ND	ug/L	10	1	1	07/30/13 07/30/13 16:13 1011
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1	1	07/30/13 07/30/13 16:13 1011
Dibromochloromethane	ND	ug/L	1.0	1	1	07/30/13 07/30/13 16:13 1011
Bromoform	ND	ug/L	5.0	1	1	07/30/13 07/30/13 16:13 1011
Tetrachloroethene	ND	ug/L	1.0	1	1	07/30/13 07/30/13 16:13 1011
Chlorobenzene	ND	ug/L	1.0	1	1	07/30/13 07/30/13 16:13 1011
Ethylbenzene	ND	ug/L	1.0	1	1	07/30/13 07/30/13 16:13 1011
m,p-Xylenes	ND	ug/L	2.0	1	1	07/30/13 07/30/13 16:13 1011
Styrene	ND	ug/L	1.0	1	1	07/30/13 07/30/13 16:13 1011
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1	1	07/30/13 07/30/13 16:13 1011
o-Xylene	ND	ug/L	1.0	1	1	07/30/13 07/30/13 16:13 1011
Isopropylbenzene	ND	ug/L	1.0	1	1	07/30/13 07/30/13 16:13 1011
1,3-Dichlorobenzene	ND	ug/L	1.0	1	1	07/30/13 07/30/13 16:13 1011
1,4-Dichlorobenzene	ND	ug/L	1.0	1	1	07/30/13 07/30/13 16:13 1011
1,2-Dichlorobenzene	ND	ug/L	1.0	1	1	07/30/13 07/30/13 16:13 1011
1,2-Dibromo-3-Chloropropane	ND	ug/L	10	1	1	07/30/13 07/30/13 16:13 1011
1,2,4-Trichlorobenzene	ND	ug/L	1.0	1	1	07/30/13 07/30/13 16:13 1011
Naphthalene	ND	ug/L	1.0	1	1	07/30/13 07/30/13 16:13 1011
1,2,3-Trichlorobenzene	ND	ug/L	1.0	1	1	07/30/13 07/30/13 16:13 1011

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August 12, 2013

Project Name: Central Ave.

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Project ID: 31576-007

<b>Sample ID: CAESB-2</b>		<b>Date/Time Sampled: 07/23/2013 08:30 PSS Sample ID: 13072314-007</b>							
<b>Matrix: GROUND WATER</b>		<b>Date/Time Received: 07/23/2013 16:40</b>							
TCL Semivolatile Organic Compounds		Analytical Method: SW-846 8270 C			Preparation Method: 3510C				
		<b>Result</b>	<b>Units</b>	<b>RL</b>	<b>Flag</b>	<b>Dil</b>	<b>Prepared</b>	<b>Analyzed</b>	<b>Analyst</b>
Acenaphthene		ND	ug/L	5.0		1	07/25/13	07/25/13 17:03	1014
Acenaphthylene		ND	ug/L	5.0		1	07/25/13	07/25/13 17:03	1014
Acetophenone		ND	ug/L	5.0		1	07/25/13	07/25/13 17:03	1014
Anthracene		ND	ug/L	5.0		1	07/25/13	07/25/13 17:03	1014
Caprolactam		ND	ug/L	5.0		1	07/25/13	07/25/13 17:03	1014
Biphenyl (Diphenyl)		ND	ug/L	5.0		1	07/25/13	07/25/13 17:03	1014
Atrazine		ND	ug/L	5.0		1	07/25/13	07/25/13 17:03	1014
Benzo(a)anthracene		ND	ug/L	5.0		1	07/25/13	07/25/13 17:03	1014
Benzo(a)pyrene		ND	ug/L	5.0		1	07/25/13	07/25/13 17:03	1014
Benzo(b)fluoranthene		ND	ug/L	5.0		1	07/25/13	07/25/13 17:03	1014
Benzo(g,h,i)perylene		ND	ug/L	5.0		1	07/25/13	07/25/13 17:03	1014
Benzo(k)fluoranthene		ND	ug/L	5.0		1	07/25/13	07/25/13 17:03	1014
Butyl benzyl phthalate		ND	ug/L	5.0		1	07/25/13	07/25/13 17:03	1014
bis(2-chloroethoxy) methane		ND	ug/L	5.0		1	07/25/13	07/25/13 17:03	1014
bis(2-chloroethyl) ether		ND	ug/L	5.0		1	07/25/13	07/25/13 17:03	1014
bis(2-chloroisopropyl) ether		ND	ug/L	5.0		1	07/25/13	07/25/13 17:03	1014
bis(2-ethylhexyl) phthalate		ND	ug/L	5.0		1	07/25/13	07/25/13 17:03	1014
4-Bromophenylphenyl ether		ND	ug/L	5.0		1	07/25/13	07/25/13 17:03	1014
Di-n-butyl phthalate		ND	ug/L	5.0		1	07/25/13	07/25/13 17:03	1014
Carbazole		ND	ug/L	5.0		1	07/25/13	07/25/13 17:03	1014
4-Chloro-3-methyl phenol		ND	ug/L	5.0		1	07/25/13	07/25/13 17:03	1014
4-Chloroaniline		ND	ug/L	10		1	07/25/13	07/25/13 17:03	1014
2-Chloronaphthalene		ND	ug/L	5.0		1	07/25/13	07/25/13 17:03	1014
2-Chlorophenol		ND	ug/L	5.0		1	07/25/13	07/25/13 17:03	1014
4-Chlorophenyl Phenyl ether		ND	ug/L	5.0		1	07/25/13	07/25/13 17:03	1014
Chrysene		ND	ug/L	5.0		1	07/25/13	07/25/13 17:03	1014
Dibenz(a,h)Anthracene		ND	ug/L	5.0		1	07/25/13	07/25/13 17:03	1014
Dibenzofuran		ND	ug/L	5.0		1	07/25/13	07/25/13 17:03	1014
3,3-Dichlorobenzidine		ND	ug/L	5.0		1	07/25/13	07/25/13 17:03	1014
2,4-Dichlorophenol		ND	ug/L	5.0		1	07/25/13	07/25/13 17:03	1014

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No: 13072314, 13072429, 13072601, 13072911, 13080206

**Whitman, Requardt & Associates, LLP., Fairfax, VA**

August 12, 2013

Project Name: Central Ave.

Project Location: Baltimore, MD

Project ID: 31576-007

<b>Sample ID: CAESB-2</b>		<b>Date/Time Sampled: 07/23/2013 08:30 PSS Sample ID: 13072314-007</b>					
<b>Matrix: GROUND WATER</b>		<b>Date/Time Received: 07/23/2013 16:40</b>					
TCL Semivolatile Organic Compounds		Analytical Method: SW-846 8270 C			Preparation Method: 3510C		
		<b>Result</b>	<b>Units</b>	<b>RL</b>	<b>Flag</b>	<b>Dil</b>	<b>Prepared</b>
Diethyl phthalate		ND	ug/L	5.0	1	1	07/25/13 07/25/13 17:03 1014
Dimethyl phthalate		ND	ug/L	5.0	1	1	07/25/13 07/25/13 17:03 1014
2,4-Dimethylphenol		ND	ug/L	5.0	1	1	07/25/13 07/25/13 17:03 1014
4,6-Dinitro-2-methyl phenol		ND	ug/L	5.0	1	1	07/25/13 07/25/13 17:03 1014
2,4-Dinitrophenol		ND	ug/L	10	1	1	07/25/13 07/25/13 17:03 1014
2,4-Dinitrotoluene		ND	ug/L	5.0	1	1	07/25/13 07/25/13 17:03 1014
2,6-Dinitrotoluene		ND	ug/L	5.0	1	1	07/25/13 07/25/13 17:03 1014
Fluoranthene		ND	ug/L	5.0	1	1	07/25/13 07/25/13 17:03 1014
Fluorene		ND	ug/L	5.0	1	1	07/25/13 07/25/13 17:03 1014
Hexachlorobenzene		ND	ug/L	5.0	1	1	07/25/13 07/25/13 17:03 1014
Hexachlorobutadiene		ND	ug/L	5.0	1	1	07/25/13 07/25/13 17:03 1014
Hexachlorocyclopentadiene		ND	ug/L	5.0	1	1	07/25/13 07/25/13 17:03 1014
Hexachloroethane		ND	ug/L	5.0	1	1	07/25/13 07/25/13 17:03 1014
Indeno(1,2,3-c,d)Pyrene		ND	ug/L	5.0	1	1	07/25/13 07/25/13 17:03 1014
Isophorone		ND	ug/L	5.0	1	1	07/25/13 07/25/13 17:03 1014
2-Methylnaphthalene		ND	ug/L	5.0	1	1	07/25/13 07/25/13 17:03 1014
2-Methyl phenol		ND	ug/L	5.0	1	1	07/25/13 07/25/13 17:03 1014
3&4-Methylphenol		ND	ug/L	5.0	1	1	07/25/13 07/25/13 17:03 1014
Naphthalene		ND	ug/L	5.0	1	1	07/25/13 07/25/13 17:03 1014
4-Nitroaniline		ND	ug/L	10	1	1	07/25/13 07/25/13 17:03 1014
3-Nitroaniline		ND	ug/L	5.0	1	1	07/25/13 07/25/13 17:03 1014
2-Nitroaniline		ND	ug/L	5.0	1	1	07/25/13 07/25/13 17:03 1014
Nitrobenzene		ND	ug/L	5.0	1	1	07/25/13 07/25/13 17:03 1014
2-Nitrophenol		ND	ug/L	5.0	1	1	07/25/13 07/25/13 17:03 1014
4-Nitrophenol		ND	ug/L	5.0	1	1	07/25/13 07/25/13 17:03 1014
N-Nitrosodi-n-propyl amine		ND	ug/L	5.0	1	1	07/25/13 07/25/13 17:03 1014
N-Nitrosodiphenylamine		ND	ug/L	5.0	1	1	07/25/13 07/25/13 17:03 1014
Di-n-octyl phthalate		ND	ug/L	10	1	1	07/25/13 07/25/13 17:03 1014
Pentachlorophenol		ND	ug/L	10	1	1	07/25/13 07/25/13 17:03 1014
Phenanthrene		ND	ug/L	5.0	1	1	07/25/13 07/25/13 17:03 1014

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 13072314, 13072429, 13072601, 13072911, 13080206

**Whitman, Requardt & Associates, LLP., Fairfax, VA**

August 12, 2013

Project Name: Central Ave.

Project Location: Baltimore, MD

Project ID: 31576-007

<b>Sample ID: CAESB-2</b>	<b>Date/Time Sampled: 07/23/2013 08:30 PSS Sample ID: 13072314-007</b>							
<b>Matrix: GROUND WATER</b>	<b>Date/Time Received: 07/23/2013 16:40</b>							
TCL Semivolatile Organic Compounds	Analytical Method: SW-846 8270 C				Preparation Method: 3510C			
	<b>Result</b>	<b>Units</b>	<b>RL</b>	<b>Flag</b>	<b>Dil</b>	<b>Prepared</b>	<b>Analyzed</b>	<b>Analyst</b>
Phenol	ND	ug/L	5.0	1		07/25/13	07/25/13 17:03	1014
Pyrene	ND	ug/L	5.0	1		07/25/13	07/25/13 17:03	1014
Pyridine	ND	ug/L	5.0	1		07/25/13	07/25/13 17:03	1014
2,4,6-Trichlorophenol	ND	ug/L	5.0	1		07/25/13	07/25/13 17:03	1014
2,4,5-Trichlorophenol	ND	ug/L	5.0	1		07/25/13	07/25/13 17:03	1014
<b>Sample ID: CAESB-6 2-10'</b>	<b>Date/Time Sampled: 07/23/2013 15:00 PSS Sample ID: 13072314-008</b>							
<b>Matrix: SOIL</b>	<b>Date/Time Received: 07/23/2013 16:40 % Solids: 89</b>							
PP Metals	Analytical Method: SW-846 6020 A				Preparation Method: 3050B			
	<b>Result</b>	<b>Units</b>	<b>RL</b>	<b>Flag</b>	<b>Dil</b>	<b>Prepared</b>	<b>Analyzed</b>	<b>Analyst</b>
Antimony	ND	mg/kg	2.5	1		07/26/13	07/29/13 16:43	1034
Arsenic	<b>3.4</b>	mg/kg	0.51	1		07/26/13	07/29/13 16:43	1034
Beryllium	ND	mg/kg	2.3	1		07/26/13	07/30/13 15:14	1034
Cadmium	ND	mg/kg	2.5	1		07/26/13	07/29/13 16:43	1034
Chromium	<b>18</b>	mg/kg	2.5	1		07/26/13	07/29/13 16:43	1034
Copper	<b>16</b>	mg/kg	2.5	1		07/26/13	07/29/13 16:43	1034
Lead	<b>87</b>	mg/kg	2.5	1		07/26/13	07/29/13 16:43	1034
Mercury	<b>0.19</b>	mg/kg	0.10	1		07/26/13	07/29/13 16:43	1034
Nickel	<b>5.8</b>	mg/kg	2.5	1		07/26/13	07/29/13 16:43	1034
Selenium	ND	mg/kg	2.5	1		07/26/13	07/29/13 16:43	1034
Silver	ND	mg/kg	2.5	1		07/26/13	07/29/13 16:43	1034
Thallium	ND	mg/kg	2.0	1		07/26/13	07/29/13 16:43	1034
Zinc	<b>17</b>	mg/kg	10	1		07/26/13	07/29/13 16:43	1034

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# **PHASE SEPARATION SCIENCE, INC.**



## CERTIFICATE OF ANALYSIS

No: 13072314, 13072429, 13072601, 13072911, 13080206

**Whitman, Requardt & Associates, LLP., Fairfax, VA**

August 12, 2013

Project Name: Central Ave.

Project Location: Baltimore, MD

Project ID: 31576-007

<b>Sample ID: CAESB-6 10-20'</b>	<b>Date/Time Sampled: 07/23/2013 15:00</b>				<b>PSS Sample ID: 13072314-009</b>			
<b>Matrix: SOIL</b>	<b>Date/Time Received: 07/23/2013 16:40</b>				<b>% Solids: 80</b>			
PP Metals	Analytical Method: SW-846 6020 A				Preparation Method: 3050B			
	<b>Result</b>	<b>Units</b>	<b>RL</b>	<b>Flag</b>	<b>Dil</b>	<b>Prepared</b>	<b>Analyzed</b>	<b>Analyst</b>
Antimony	ND	mg/kg	3.0	1		07/26/13	07/29/13 16:49	1034
Arsenic	<b>2.0</b>	mg/kg	0.60	1		07/26/13	07/29/13 16:49	1034
Beryllium	ND	mg/kg	2.4	1		07/26/13	07/30/13 15:21	1034
Cadmium	ND	mg/kg	3.0	1		07/26/13	07/29/13 16:49	1034
Chromium	<b>25</b>	mg/kg	3.0	1		07/26/13	07/29/13 16:49	1034
Copper	<b>11</b>	mg/kg	3.0	1		07/26/13	07/29/13 16:49	1034
Lead	<b>8.2</b>	mg/kg	3.0	1		07/26/13	07/29/13 16:49	1034
Mercury	ND	mg/kg	0.12	1		07/26/13	07/29/13 16:49	1034
Nickel	<b>9.7</b>	mg/kg	3.0	1		07/26/13	07/29/13 16:49	1034
Selenium	ND	mg/kg	3.0	1		07/26/13	07/29/13 16:49	1034
Silver	ND	mg/kg	3.0	1		07/26/13	07/29/13 16:49	1034
Thallium	ND	mg/kg	2.4	1		07/26/13	07/29/13 16:49	1034
Zinc	<b>20</b>	mg/kg	12	1		07/26/13	07/29/13 16:49	1034

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 13072314, 13072429, 13072601, 13072911, 13080206

**Whitman, Requardt & Associates, LLP., Fairfax, VA**

August 12, 2013

Project Name: Central Ave.

Project Location: Baltimore, MD

Project ID: 31576-007

<b>Sample ID: CAESB-6 8-10'</b>	<b>Date/Time Sampled: 07/23/2013 15:00</b>			<b>PSS Sample ID: 13072314-010</b>				
<b>Matrix: SOIL</b>	<b>Date/Time Received: 07/23/2013 16:40</b>			<b>% Solids: 89</b>				
Total Petroleum Hydrocarbons - DRO	Analytical Method: SW-846 8015 C			Preparation Method: 3550				
	<b>Result</b>	<b>Units</b>	<b>RL</b>	<b>Flag</b>	<b>Dil</b>	<b>Prepared</b>	<b>Analyzed</b>	<b>Analyst</b>
TPH-DRO (Diesel Range Organics)	<b>9.0</b>	mg/kg	4.4		1	07/25/13	07/26/13 00:06	1040
Total Petroleum Hydrocarbons-GRO	Analytical Method: SW-846 8015C			Preparation Method: 5030				
	<b>Result</b>	<b>Units</b>	<b>RL</b>	<b>Flag</b>	<b>Dil</b>	<b>Prepared</b>	<b>Analyzed</b>	<b>Analyst</b>
TPH-GRO (Gasoline Range Organics)	ND	ug/kg	110		1	07/24/13	07/24/13 16:17	1035

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**Whitman, Requardt & Associates, LLP., Fairfax, VA**

August 12, 2013

Project Name: Central Ave.

Project Location: Baltimore, MD

Project ID: 31576-007

<b>Sample ID: CAESB-6 8-10'</b>		<b>Date/Time Sampled: 07/23/2013 15:00</b>			<b>PSS Sample ID: 13072314-010</b>		
<b>Matrix: SOIL</b>		<b>Date/Time Received: 07/23/2013 16:40</b>			<b>% Solids: 89</b>		
TCL Volatile Organic Compounds		Analytical Method: SW-846 8260 B			Preparation Method: 5030		
		<b>Result</b>	<b>Units</b>	<b>RL</b>	<b>Flag</b>	<b>Dil</b>	<b>Prepared</b>
Dichlorodifluoromethane		ND	ug/kg	5.6	1	1	07/25/13 07/25/13 20:15 1011
Chloromethane		ND	ug/kg	5.6	1	1	07/25/13 07/25/13 20:15 1011
1,1,2-Trichloro-1,2,2-Trifluoroethane		ND	ug/kg	5.6	1	1	07/25/13 07/25/13 20:15 1011
Vinyl Chloride		ND	ug/kg	5.6	1	1	07/25/13 07/25/13 20:15 1011
Bromomethane		ND	ug/kg	5.6	1	1	07/25/13 07/25/13 20:15 1011
Chloroethane		ND	ug/kg	5.6	1	1	07/25/13 07/25/13 20:15 1011
Acetone		22	ug/kg	22	1	1	07/25/13 07/25/13 20:15 1011
Cyclohexane		ND	ug/kg	22	1	1	07/25/13 07/25/13 20:15 1011
Trichlorofluoromethane		ND	ug/kg	5.6	1	1	07/25/13 07/25/13 20:15 1011
1,1-Dichloroethene		ND	ug/kg	5.6	1	1	07/25/13 07/25/13 20:15 1011
Methylene Chloride		ND	ug/kg	5.6	1	1	07/25/13 07/25/13 20:15 1011
trans-1,2-Dichloroethene		ND	ug/kg	5.6	1	1	07/25/13 07/25/13 20:15 1011
Methyl-t-butyl ether		ND	ug/kg	5.6	1	1	07/25/13 07/25/13 20:15 1011
1,1-Dichloroethane		ND	ug/kg	5.6	1	1	07/25/13 07/25/13 20:15 1011
2-Butanone (MEK)		ND	ug/kg	22	1	1	07/25/13 07/25/13 20:15 1011
cis-1,2-Dichloroethene		ND	ug/kg	5.6	1	1	07/25/13 07/25/13 20:15 1011
Bromochloromethane		ND	ug/kg	5.6	1	1	07/25/13 07/25/13 20:15 1011
Chloroform		ND	ug/kg	5.6	1	1	07/25/13 07/25/13 20:15 1011
1,1,1-Trichloroethane		ND	ug/kg	5.6	1	1	07/25/13 07/25/13 20:15 1011
1,2-Dichloroethane		ND	ug/kg	5.6	1	1	07/25/13 07/25/13 20:15 1011
Carbon Tetrachloride		ND	ug/kg	5.6	1	1	07/25/13 07/25/13 20:15 1011
Benzene		ND	ug/kg	5.6	1	1	07/25/13 07/25/13 20:15 1011
1,2-Dichloropropane		ND	ug/kg	5.6	1	1	07/25/13 07/25/13 20:15 1011
Carbon Disulfide		ND	ug/kg	11	1	1	07/25/13 07/25/13 20:15 1011
Methylcyclohexane		ND	ug/kg	22	1	1	07/25/13 07/25/13 20:15 1011
Trichloroethene		ND	ug/kg	5.6	1	1	07/25/13 07/25/13 20:15 1011
Methyl Acetate		ND	ug/kg	22	1	1	07/25/13 07/25/13 20:15 1011
Bromodichloromethane		ND	ug/kg	5.6	1	1	07/25/13 07/25/13 20:15 1011
cis-1,3-Dichloropropene		ND	ug/kg	5.6	1	1	07/25/13 07/25/13 20:15 1011
4-Methyl-2-Pantanone		ND	ug/kg	22	1	1	07/25/13 07/25/13 20:15 1011

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 13072314, 13072429, 13072601, 13072911, 13080206

**Whitman, Requardt & Associates, LLP., Fairfax, VA**

August 12, 2013

Project Name: Central Ave.

Project Location: Baltimore, MD

Project ID: 31576-007

<b>Sample ID: CAESB-6 8-10'</b>		<b>Date/Time Sampled: 07/23/2013 15:00</b>				<b>PSS Sample ID: 13072314-010</b>		
<b>Matrix: SOIL</b>		<b>Date/Time Received: 07/23/2013 16:40</b>				<b>% Solids: 89</b>		
TCL Volatile Organic Compounds		Analytical Method: SW-846 8260 B				Preparation Method: 5030		
		<b>Result</b>	<b>Units</b>	<b>RL</b>	<b>Flag</b>	<b>Dil</b>	<b>Prepared</b>	<b>Analyzed</b>
trans-1,3-Dichloropropene		ND	ug/kg	5.6	1	1	07/25/13	07/25/13 20:15
1,1,2-Trichloroethane		ND	ug/kg	5.6	1	1	07/25/13	07/25/13 20:15
Toluene		ND	ug/kg	5.6	1	1	07/25/13	07/25/13 20:15
2-Hexanone		ND	ug/kg	22	1	1	07/25/13	07/25/13 20:15
1,2-Dibromoethane (EDB)		ND	ug/kg	5.6	1	1	07/25/13	07/25/13 20:15
Dibromochloromethane		ND	ug/kg	5.6	1	1	07/25/13	07/25/13 20:15
Bromoform		ND	ug/kg	5.6	1	1	07/25/13	07/25/13 20:15
Tetrachloroethene		ND	ug/kg	5.6	1	1	07/25/13	07/25/13 20:15
Chlorobenzene		ND	ug/kg	5.6	1	1	07/25/13	07/25/13 20:15
Ethylbenzene		ND	ug/kg	5.6	1	1	07/25/13	07/25/13 20:15
m,p-Xylenes		ND	ug/kg	11	1	1	07/25/13	07/25/13 20:15
Styrene		ND	ug/kg	5.6	1	1	07/25/13	07/25/13 20:15
1,1,2,2-Tetrachloroethane		ND	ug/kg	5.6	1	1	07/25/13	07/25/13 20:15
o-Xylene		ND	ug/kg	5.6	1	1	07/25/13	07/25/13 20:15
Isopropylbenzene		ND	ug/kg	5.6	1	1	07/25/13	07/25/13 20:15
1,3-Dichlorobenzene		ND	ug/kg	5.6	1	1	07/25/13	07/25/13 20:15
1,4-Dichlorobenzene		ND	ug/kg	5.6	1	1	07/25/13	07/25/13 20:15
1,2-Dichlorobenzene		ND	ug/kg	5.6	1	1	07/25/13	07/25/13 20:15
1,2-Dibromo-3-Chloropropane		ND	ug/kg	44	1	1	07/25/13	07/25/13 20:15
1,2,4-Trichlorobenzene		ND	ug/kg	5.6	1	1	07/25/13	07/25/13 20:15
Naphthalene		ND	ug/kg	5.6	1	1	07/25/13	07/25/13 20:15
1,2,3-Trichlorobenzene		ND	ug/kg	5.6	1	1	07/25/13	07/25/13 20:15

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August 12, 2013

Project Name: Central Ave.

Project Location: Baltimore, MD

Project ID: 31576-007

Sample ID: CAESB-6 8-10'	Date/Time Sampled: 07/23/2013 15:00				PSS Sample ID: 13072314-010			
Matrix: SOIL	Date/Time Received: 07/23/2013 16:40				% Solids: 89			
TCL Semivolatile Organic Compounds	Analytical Method: SW-846 8270 C				Preparation Method: 3550			
	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Acenaphthene	ND	ug/kg	190	1	1	07/26/13	07/26/13 15:03	1014
Acenaphthylene	ND	ug/kg	190	1	1	07/26/13	07/26/13 15:03	1014
Acetophenone	ND	ug/kg	190	1	1	07/26/13	07/26/13 15:03	1014
Anthracene	ND	ug/kg	190	1	1	07/26/13	07/26/13 15:03	1014
Benzo(a)anthracene	ND	ug/kg	190	1	1	07/26/13	07/26/13 15:03	1014
Benzo(a)pyrene	ND	ug/kg	190	1	1	07/26/13	07/26/13 15:03	1014
Benzo(b)fluoranthene	ND	ug/kg	190	1	1	07/26/13	07/26/13 15:03	1014
Benzo(g,h,i)perylene	ND	ug/kg	190	1	1	07/26/13	07/26/13 15:03	1014
Benzo(k)fluoranthene	ND	ug/kg	190	1	1	07/26/13	07/26/13 15:03	1014
Biphenyl (Diphenyl)	ND	ug/kg	190	1	1	07/26/13	07/26/13 15:03	1014
Butyl benzyl phthalate	ND	ug/kg	190	1	1	07/26/13	07/26/13 15:03	1014
bis(2-chloroethoxy) methane	ND	ug/kg	190	1	1	07/26/13	07/26/13 15:03	1014
bis(2-chloroethyl) ether	ND	ug/kg	190	1	1	07/26/13	07/26/13 15:03	1014
bis(2-chloroisopropyl) ether	ND	ug/kg	190	1	1	07/26/13	07/26/13 15:03	1014
bis(2-ethylhexyl) phthalate	ND	ug/kg	190	1	1	07/26/13	07/26/13 15:03	1014
4-Bromophenylphenyl ether	ND	ug/kg	190	1	1	07/26/13	07/26/13 15:03	1014
Di-n-butyl phthalate	ND	ug/kg	380	1	1	07/26/13	07/26/13 15:03	1014
Carbazole	ND	ug/kg	190	1	1	07/26/13	07/26/13 15:03	1014
4-Chloro-3-methyl phenol	ND	ug/kg	190	1	1	07/26/13	07/26/13 15:03	1014
4-Chloroaniline	ND	ug/kg	380	1	1	07/26/13	07/26/13 15:03	1014
2-Chloronaphthalene	ND	ug/kg	190	1	1	07/26/13	07/26/13 15:03	1014
2-Chlorophenol	ND	ug/kg	190	1	1	07/26/13	07/26/13 15:03	1014
4-Chlorophenyl Phenyl ether	ND	ug/kg	190	1	1	07/26/13	07/26/13 15:03	1014
Chrysene	ND	ug/kg	190	1	1	07/26/13	07/26/13 15:03	1014
Dibenz(a,h)Anthracene	ND	ug/kg	190	1	1	07/26/13	07/26/13 15:03	1014
Dibenzofuran	ND	ug/kg	190	1	1	07/26/13	07/26/13 15:03	1014
3,3-Dichlorobenzidine	ND	ug/kg	190	1	1	07/26/13	07/26/13 15:03	1014
2,4-Dichlorophenol	ND	ug/kg	190	1	1	07/26/13	07/26/13 15:03	1014
Diethyl phthalate	ND	ug/kg	190	1	1	07/26/13	07/26/13 15:03	1014
Dimethyl phthalate	ND	ug/kg	190	1	1	07/26/13	07/26/13 15:03	1014

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 13072314, 13072429, 13072601, 13072911, 13080206

**Whitman, Requardt & Associates, LLP., Fairfax, VA**

August 12, 2013

Project Name: Central Ave.

Project Location: Baltimore, MD

Project ID: 31576-007

<b>Sample ID: CAESB-6 8-10'</b>		<b>Date/Time Sampled: 07/23/2013 15:00</b>			<b>PSS Sample ID: 13072314-010</b>		
<b>Matrix: SOIL</b>		<b>Date/Time Received: 07/23/2013 16:40</b>			<b>% Solids: 89</b>		
TCL Semivolatile Organic Compounds		Analytical Method: SW-846 8270 C			Preparation Method: 3550		
		<b>Result</b>	<b>Units</b>	<b>RL</b>	<b>Flag</b>	<b>Dil</b>	<b>Prepared</b>
2,4-Dimethylphenol		ND	ug/kg	190	1	1	07/26/13 07/26/13 15:03 1014
4,6-Dinitro-2-methyl phenol		ND	ug/kg	190	1	1	07/26/13 07/26/13 15:03 1014
2,4-Dinitrophenol		ND	ug/kg	380	1	1	07/26/13 07/26/13 15:03 1014
2,4-Dinitrotoluene		ND	ug/kg	190	1	1	07/26/13 07/26/13 15:03 1014
2,6-Dinitrotoluene		ND	ug/kg	190	1	1	07/26/13 07/26/13 15:03 1014
Fluoranthene		ND	ug/kg	190	1	1	07/26/13 07/26/13 15:03 1014
Fluorene		ND	ug/kg	190	1	1	07/26/13 07/26/13 15:03 1014
Hexachlorobenzene		ND	ug/kg	190	1	1	07/26/13 07/26/13 15:03 1014
Hexachlorobutadiene		ND	ug/kg	190	1	1	07/26/13 07/26/13 15:03 1014
Hexachlorocyclopentadiene		ND	ug/kg	190	1	1	07/26/13 07/26/13 15:03 1014
Hexachloroethane		ND	ug/kg	190	1	1	07/26/13 07/26/13 15:03 1014
Indeno(1,2,3-c,d)Pyrene		ND	ug/kg	190	1	1	07/26/13 07/26/13 15:03 1014
Isophorone		ND	ug/kg	190	1	1	07/26/13 07/26/13 15:03 1014
2-Methylnaphthalene		ND	ug/kg	190	1	1	07/26/13 07/26/13 15:03 1014
2-Methyl phenol		ND	ug/kg	190	1	1	07/26/13 07/26/13 15:03 1014
3&4-Methylphenol		ND	ug/kg	190	1	1	07/26/13 07/26/13 15:03 1014
Naphthalene		ND	ug/kg	190	1	1	07/26/13 07/26/13 15:03 1014
4-Nitroaniline		ND	ug/kg	190	1	1	07/26/13 07/26/13 15:03 1014
3-Nitroaniline		ND	ug/kg	190	1	1	07/26/13 07/26/13 15:03 1014
2-Nitroaniline		ND	ug/kg	380	1	1	07/26/13 07/26/13 15:03 1014
Nitrobenzene		ND	ug/kg	190	1	1	07/26/13 07/26/13 15:03 1014
2-Nitrophenol		ND	ug/kg	190	1	1	07/26/13 07/26/13 15:03 1014
4-Nitrophenol		ND	ug/kg	190	1	1	07/26/13 07/26/13 15:03 1014
N-Nitrosodi-n-propyl amine		ND	ug/kg	190	1	1	07/26/13 07/26/13 15:03 1014
N-Nitrosodiphenylamine		ND	ug/kg	190	1	1	07/26/13 07/26/13 15:03 1014
Di-n-octyl phthalate		ND	ug/kg	190	1	1	07/26/13 07/26/13 15:03 1014
Pentachlorophenol		ND	ug/kg	380	1	1	07/26/13 07/26/13 15:03 1014
Phenanthrene		ND	ug/kg	190	1	1	07/26/13 07/26/13 15:03 1014
Phenol		ND	ug/kg	190	1	1	07/26/13 07/26/13 15:03 1014
Atrazine		ND	ug/kg	190	1	1	07/26/13 07/26/13 15:03 1014

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 13072314, 13072429, 13072601, 13072911, 13080206

**Whitman, Requardt & Associates, LLP., Fairfax, VA**

August 12, 2013

Project Name: Central Ave.

Project Location: Baltimore, MD

Project ID: 31576-007

<b>Sample ID: CAESB-6 8-10'</b>	<b>Date/Time Sampled: 07/23/2013 15:00</b>			<b>PSS Sample ID: 13072314-010</b>				
<b>Matrix: SOIL</b>	<b>Date/Time Received: 07/23/2013 16:40</b>			<b>% Solids: 89</b>				
TCL Semivolatile Organic Compounds	Analytical Method: SW-846 8270 C			Preparation Method: 3550				
	<b>Result</b>	<b>Units</b>	<b>RL</b>	<b>Flag</b>	<b>Dil</b>	<b>Prepared</b>	<b>Analyzed</b>	<b>Analyst</b>
Pyrene	ND	ug/kg	190	1	1	07/26/13	07/26/13 15:03	1014
Pyridine	ND	ug/kg	190	1	1	07/26/13	07/26/13 15:03	1014
Caprolactam	ND	ug/kg	190	1	1	07/26/13	07/26/13 15:03	1014
2,4,6-Trichlorophenol	ND	ug/kg	190	1	1	07/26/13	07/26/13 15:03	1014
2,4,5-Trichlorophenol	ND	ug/kg	190	1	1	07/26/13	07/26/13 15:03	1014

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 13072314, 13072429, 13072601, 13072911, 13080206

**Whitman, Requardt & Associates, LLP., Fairfax, VA**

August 12, 2013

Project Name: Central Ave.

Project Location: Baltimore, MD

Project ID: 31576-007

<b>Sample ID: CAESB-3</b>	<b>Date/Time Sampled: 07/23/2013 15:30 PSS Sample ID: 13072314-011</b>							
<b>Matrix: GROUND WATER</b>	<b>Date/Time Received: 07/23/2013 16:40</b>							
Dissolved PP Metals	Analytical Method: SW-846 6020 A				Preparation Method: 3005A			
	<b>Result</b>	<b>Units</b>	<b>RL</b>	<b>Flag</b>	<b>Dil</b>	<b>Prepared</b>	<b>Analyzed</b>	<b>Analyst</b>
Antimony	ND	ug/L	5.0	1		07/29/13	07/29/13 16:07	1033
Arsenic	ND	ug/L	1.0	1		07/29/13	07/31/13 14:27	1033
Beryllium	ND	ug/L	1.0	1		07/29/13	07/31/13 14:27	1033
Cadmium	ND	ug/L	1.0	1		07/29/13	07/29/13 16:07	1033
Chromium	ND	ug/L	1.0	1		07/29/13	07/31/13 14:27	1033
Copper	ND	ug/L	1.0	1		07/29/13	07/31/13 14:27	1033
Lead	ND	ug/L	1.0	1		07/29/13	07/29/13 16:07	1033
Mercury	ND	ug/L	0.20	1		07/29/13	07/29/13 16:07	1033
Nickel	<b>5.4</b>	ug/L	1.0	1		07/29/13	07/31/13 14:27	1033
Selenium	ND	ug/L	1.0	1		07/29/13	07/29/13 16:07	1033
Silver	ND	ug/L	1.0	1		07/29/13	07/29/13 16:07	1033
Thallium	ND	ug/L	1.0	1		07/29/13	07/29/13 16:07	1033
Zinc	ND	ug/L	20	1		07/29/13	07/31/13 14:27	1033
Total Petroleum Hydrocarbons - DRO	Analytical Method: SW-846 8015 C				Preparation Method: 3510C			
	<b>Result</b>	<b>Units</b>	<b>RL</b>	<b>Flag</b>	<b>Dil</b>	<b>Prepared</b>	<b>Analyzed</b>	<b>Analyst</b>
TPH-DRO (Diesel Range Organics)	<b>0.13</b>	mg/L	0.10	1		07/26/13	07/26/13 12:48	1040
Total Petroleum Hydrocarbons-GRO	Analytical Method: SW-846 8015C				Preparation Method: 5030B			
	<b>Result</b>	<b>Units</b>	<b>RL</b>	<b>Flag</b>	<b>Dil</b>	<b>Prepared</b>	<b>Analyzed</b>	<b>Analyst</b>
TPH-GRO (Gasoline Range Organics)	ND	ug/L	100	1		07/24/13	07/24/13 13:39	1035

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 13072314, 13072429, 13072601, 13072911, 13080206

**Whitman, Requardt & Associates, LLP., Fairfax, VA**

August 12, 2013

Project Name: Central Ave.

Project Location: Baltimore, MD

Project ID: 31576-007

Sample ID: CAESB-3	Date/Time Sampled: 07/23/2013 15:30 PSS Sample ID: 13072314-011					
Matrix: GROUND WATER	Date/Time Received: 07/23/2013 16:40					
TCL Volatile Organic Compounds	Analytical Method: SW-846 8260 B			Preparation Method: 5030B		
	Result	Units	RL	Flag	Dil	Prepared Analyzed Analyst
Dichlorodifluoromethane	ND	ug/L	1.0	1	1	07/30/13 07/31/13 03:54 1011
Chloromethane	ND	ug/L	1.0	1	1	07/30/13 07/31/13 03:54 1011
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	ug/L	1.0	1	1	07/30/13 07/31/13 03:54 1011
Vinyl Chloride	ND	ug/L	1.0	1	1	07/30/13 07/31/13 03:54 1011
Bromomethane	ND	ug/L	1.0	1	1	07/30/13 07/31/13 03:54 1011
Chloroethane	ND	ug/L	1.0	1	1	07/30/13 07/31/13 03:54 1011
Acetone	ND	ug/L	10	1	1	07/30/13 07/31/13 03:54 1011
Cyclohexane	ND	ug/L	10	1	1	07/30/13 07/31/13 03:54 1011
Trichlorofluoromethane	ND	ug/L	5.0	1	1	07/30/13 07/31/13 03:54 1011
1,1-Dichloroethene	ND	ug/L	1.0	1	1	07/30/13 07/31/13 03:54 1011
Methylene Chloride	ND	ug/L	1.0	1	1	07/30/13 07/31/13 03:54 1011
trans-1,2-Dichloroethene	ND	ug/L	1.0	1	1	07/30/13 07/31/13 03:54 1011
Methyl-t-butyl ether	ND	ug/L	1.0	1	1	07/30/13 07/31/13 03:54 1011
1,1-Dichloroethane	ND	ug/L	1.0	1	1	07/30/13 07/31/13 03:54 1011
2-Butanone (MEK)	ND	ug/L	10	1	1	07/30/13 07/31/13 03:54 1011
cis-1,2-Dichloroethene	ND	ug/L	1.0	1	1	07/30/13 07/31/13 03:54 1011
Bromochloromethane	ND	ug/L	1.0	1	1	07/30/13 07/31/13 03:54 1011
Chloroform	ND	ug/L	1.0	1	1	07/30/13 07/31/13 03:54 1011
1,1,1-Trichloroethane	ND	ug/L	1.0	1	1	07/30/13 07/31/13 03:54 1011
1,2-Dichloroethane	ND	ug/L	1.0	1	1	07/30/13 07/31/13 03:54 1011
Carbon Tetrachloride	ND	ug/L	1.0	1	1	07/30/13 07/31/13 03:54 1011
Benzene	ND	ug/L	1.0	1	1	07/30/13 07/31/13 03:54 1011
1,2-Dichloropropane	ND	ug/L	1.0	1	1	07/30/13 07/31/13 03:54 1011
Methyl Acetate	ND	ug/L	10	1	1	07/30/13 07/31/13 03:54 1011
Methylcyclohexane	ND	ug/L	10	1	1	07/30/13 07/31/13 03:54 1011
Trichloroethene	2.3	ug/L	1.0	1	1	07/30/13 07/31/13 03:54 1011
Carbon Disulfide	ND	ug/L	10	1	1	07/30/13 07/31/13 03:54 1011
Bromodichloromethane	ND	ug/L	1.0	1	1	07/30/13 07/31/13 03:54 1011
cis-1,3-Dichloropropene	ND	ug/L	1.0	1	1	07/30/13 07/31/13 03:54 1011
4-Methyl-2-Pantanone	ND	ug/L	5.0	1	1	07/30/13 07/31/13 03:54 1011

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 13072314, 13072429, 13072601, 13072911, 13080206

**Whitman, Requardt & Associates, LLP., Fairfax, VA**

August 12, 2013

Project Name: Central Ave.

Project Location: Baltimore, MD

Project ID: 31576-007

Sample ID: CAESB-3	Date/Time Sampled: 07/23/2013 15:30 PSS Sample ID: 13072314-011					
Matrix: GROUND WATER	Date/Time Received: 07/23/2013 16:40					
TCL Volatile Organic Compounds	Analytical Method: SW-846 8260 B			Preparation Method: 5030B		
	Result	Units	RL	Flag	Dil	Prepared Analyzed Analyst
trans-1,3-Dichloropropene	ND	ug/L	1.0	1	1	07/30/13 07/31/13 03:54 1011
1,1,2-Trichloroethane	ND	ug/L	1.0	1	1	07/30/13 07/31/13 03:54 1011
Toluene	ND	ug/L	1.0	1	1	07/30/13 07/31/13 03:54 1011
2-Hexanone	ND	ug/L	10	1	1	07/30/13 07/31/13 03:54 1011
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1	1	07/30/13 07/31/13 03:54 1011
Dibromochloromethane	ND	ug/L	1.0	1	1	07/30/13 07/31/13 03:54 1011
Bromoform	ND	ug/L	5.0	1	1	07/30/13 07/31/13 03:54 1011
Tetrachloroethene	2.4	ug/L	1.0	1	1	07/30/13 07/31/13 03:54 1011
Chlorobenzene	ND	ug/L	1.0	1	1	07/30/13 07/31/13 03:54 1011
Ethylbenzene	ND	ug/L	1.0	1	1	07/30/13 07/31/13 03:54 1011
m,p-Xylenes	ND	ug/L	2.0	1	1	07/30/13 07/31/13 03:54 1011
Styrene	ND	ug/L	1.0	1	1	07/30/13 07/31/13 03:54 1011
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1	1	07/30/13 07/31/13 03:54 1011
o-Xylene	ND	ug/L	1.0	1	1	07/30/13 07/31/13 03:54 1011
Isopropylbenzene	ND	ug/L	1.0	1	1	07/30/13 07/31/13 03:54 1011
1,3-Dichlorobenzene	ND	ug/L	1.0	1	1	07/30/13 07/31/13 03:54 1011
1,4-Dichlorobenzene	ND	ug/L	1.0	1	1	07/30/13 07/31/13 03:54 1011
1,2-Dichlorobenzene	ND	ug/L	1.0	1	1	07/30/13 07/31/13 03:54 1011
1,2-Dibromo-3-Chloropropane	ND	ug/L	10	1	1	07/30/13 07/31/13 03:54 1011
1,2,4-Trichlorobenzene	ND	ug/L	1.0	1	1	07/30/13 07/31/13 03:54 1011
Naphthalene	ND	ug/L	1.0	1	1	07/30/13 07/31/13 03:54 1011
1,2,3-Trichlorobenzene	ND	ug/L	1.0	1	1	07/30/13 07/31/13 03:54 1011

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August 12, 2013

Project Name: Central Ave.

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Project ID: 31576-007

<b>Sample ID: CAESB-3</b>		<b>Date/Time Sampled: 07/23/2013 15:30 PSS Sample ID: 13072314-011</b>					
<b>Matrix: GROUND WATER</b>		<b>Date/Time Received: 07/23/2013 16:40</b>					
TCL Semivolatile Organic Compounds		Analytical Method: SW-846 8270 C			Preparation Method: 3510C		
		<b>Result</b>	<b>Units</b>	<b>RL</b>	<b>Flag</b>	<b>Dil</b>	<b>Prepared</b>
Acenaphthene		ND	ug/L	5.0	1	1	07/25/13 07/25/13 17:32 1014
Acenaphthylene		ND	ug/L	5.0	1	1	07/25/13 07/25/13 17:32 1014
Acetophenone		ND	ug/L	5.0	1	1	07/25/13 07/25/13 17:32 1014
Anthracene		ND	ug/L	5.0	1	1	07/25/13 07/25/13 17:32 1014
Caprolactam		ND	ug/L	5.0	1	1	07/25/13 07/25/13 17:32 1014
Biphenyl (Diphenyl)		ND	ug/L	5.0	1	1	07/25/13 07/25/13 17:32 1014
Atrazine		ND	ug/L	5.0	1	1	07/25/13 07/25/13 17:32 1014
Benzo(a)anthracene		ND	ug/L	5.0	1	1	07/25/13 07/25/13 17:32 1014
Benzo(a)pyrene		ND	ug/L	5.0	1	1	07/25/13 07/25/13 17:32 1014
Benzo(b)fluoranthene		ND	ug/L	5.0	1	1	07/25/13 07/25/13 17:32 1014
Benzo(g,h,i)perylene		ND	ug/L	5.0	1	1	07/25/13 07/25/13 17:32 1014
Benzo(k)fluoranthene		ND	ug/L	5.0	1	1	07/25/13 07/25/13 17:32 1014
Butyl benzyl phthalate		ND	ug/L	5.0	1	1	07/25/13 07/25/13 17:32 1014
bis(2-chloroethoxy) methane		ND	ug/L	5.0	1	1	07/25/13 07/25/13 17:32 1014
bis(2-chloroethyl) ether		ND	ug/L	5.0	1	1	07/25/13 07/25/13 17:32 1014
bis(2-chloroisopropyl) ether		ND	ug/L	5.0	1	1	07/25/13 07/25/13 17:32 1014
bis(2-ethylhexyl) phthalate		ND	ug/L	5.0	1	1	07/25/13 07/25/13 17:32 1014
4-Bromophenylphenyl ether		ND	ug/L	5.0	1	1	07/25/13 07/25/13 17:32 1014
Di-n-butyl phthalate		ND	ug/L	5.0	1	1	07/25/13 07/25/13 17:32 1014
Carbazole		ND	ug/L	5.0	1	1	07/25/13 07/25/13 17:32 1014
4-Chloro-3-methyl phenol		ND	ug/L	5.0	1	1	07/25/13 07/25/13 17:32 1014
4-Chloroaniline		ND	ug/L	10	1	1	07/25/13 07/25/13 17:32 1014
2-Chloronaphthalene		ND	ug/L	5.0	1	1	07/25/13 07/25/13 17:32 1014
2-Chlorophenol		ND	ug/L	5.0	1	1	07/25/13 07/25/13 17:32 1014
4-Chlorophenyl Phenyl ether		ND	ug/L	5.0	1	1	07/25/13 07/25/13 17:32 1014
Chrysene		ND	ug/L	5.0	1	1	07/25/13 07/25/13 17:32 1014
Dibenz(a,h)Anthracene		ND	ug/L	5.0	1	1	07/25/13 07/25/13 17:32 1014
Dibenzofuran		ND	ug/L	5.0	1	1	07/25/13 07/25/13 17:32 1014
3,3-Dichlorobenzidine		ND	ug/L	5.0	1	1	07/25/13 07/25/13 17:32 1014
2,4-Dichlorophenol		ND	ug/L	5.0	1	1	07/25/13 07/25/13 17:32 1014

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 13072314, 13072429, 13072601, 13072911, 13080206

**Whitman, Requardt & Associates, LLP., Fairfax, VA**

August 12, 2013

Project Name: Central Ave.

Project Location: Baltimore, MD

Project ID: 31576-007

<b>Sample ID: CAESB-3</b>		<b>Date/Time Sampled: 07/23/2013 15:30 PSS Sample ID: 13072314-011</b>					
<b>Matrix: GROUND WATER</b>		<b>Date/Time Received: 07/23/2013 16:40</b>					
TCL Semivolatile Organic Compounds		Analytical Method: SW-846 8270 C			Preparation Method: 3510C		
		<b>Result</b>	<b>Units</b>	<b>RL</b>	<b>Flag</b>	<b>Dil</b>	<b>Prepared</b>
Diethyl phthalate		ND	ug/L	5.0	1	1	07/25/13 07/25/13 17:32 1014
Dimethyl phthalate		ND	ug/L	5.0	1	1	07/25/13 07/25/13 17:32 1014
2,4-Dimethylphenol		ND	ug/L	5.0	1	1	07/25/13 07/25/13 17:32 1014
4,6-Dinitro-2-methyl phenol		ND	ug/L	5.0	1	1	07/25/13 07/25/13 17:32 1014
2,4-Dinitrophenol		ND	ug/L	10	1	1	07/25/13 07/25/13 17:32 1014
2,4-Dinitrotoluene		ND	ug/L	5.0	1	1	07/25/13 07/25/13 17:32 1014
2,6-Dinitrotoluene		ND	ug/L	5.0	1	1	07/25/13 07/25/13 17:32 1014
Fluoranthene		ND	ug/L	5.0	1	1	07/25/13 07/25/13 17:32 1014
Fluorene		ND	ug/L	5.0	1	1	07/25/13 07/25/13 17:32 1014
Hexachlorobenzene		ND	ug/L	5.0	1	1	07/25/13 07/25/13 17:32 1014
Hexachlorobutadiene		ND	ug/L	5.0	1	1	07/25/13 07/25/13 17:32 1014
Hexachlorocyclopentadiene		ND	ug/L	5.0	1	1	07/25/13 07/25/13 17:32 1014
Hexachloroethane		ND	ug/L	5.0	1	1	07/25/13 07/25/13 17:32 1014
Indeno(1,2,3-c,d)Pyrene		ND	ug/L	5.0	1	1	07/25/13 07/25/13 17:32 1014
Isophorone		ND	ug/L	5.0	1	1	07/25/13 07/25/13 17:32 1014
2-Methylnaphthalene		ND	ug/L	5.0	1	1	07/25/13 07/25/13 17:32 1014
2-Methyl phenol		ND	ug/L	5.0	1	1	07/25/13 07/25/13 17:32 1014
3&4-Methylphenol		ND	ug/L	5.0	1	1	07/25/13 07/25/13 17:32 1014
Naphthalene		ND	ug/L	5.0	1	1	07/25/13 07/25/13 17:32 1014
4-Nitroaniline		ND	ug/L	10	1	1	07/25/13 07/25/13 17:32 1014
3-Nitroaniline		ND	ug/L	5.0	1	1	07/25/13 07/25/13 17:32 1014
2-Nitroaniline		ND	ug/L	5.0	1	1	07/25/13 07/25/13 17:32 1014
Nitrobenzene		ND	ug/L	5.0	1	1	07/25/13 07/25/13 17:32 1014
2-Nitrophenol		ND	ug/L	5.0	1	1	07/25/13 07/25/13 17:32 1014
4-Nitrophenol		ND	ug/L	5.0	1	1	07/25/13 07/25/13 17:32 1014
N-Nitrosodi-n-propyl amine		ND	ug/L	5.0	1	1	07/25/13 07/25/13 17:32 1014
N-Nitrosodiphenylamine		ND	ug/L	5.0	1	1	07/25/13 07/25/13 17:32 1014
Di-n-octyl phthalate		ND	ug/L	10	1	1	07/25/13 07/25/13 17:32 1014
Pentachlorophenol		ND	ug/L	10	1	1	07/25/13 07/25/13 17:32 1014
Phenanthrene		ND	ug/L	5.0	1	1	07/25/13 07/25/13 17:32 1014

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 13072314, 13072429, 13072601, 13072911, 13080206

**Whitman, Requardt & Associates, LLP., Fairfax, VA**

August 12, 2013

Project Name: Central Ave.

Project Location: Baltimore, MD

Project ID: 31576-007

<b>Sample ID: CAESB-3</b>	<b>Date/Time Sampled: 07/23/2013 15:30 PSS Sample ID: 13072314-011</b>							
<b>Matrix: GROUND WATER</b>	<b>Date/Time Received: 07/23/2013 16:40</b>							
TCL Semivolatile Organic Compounds	Analytical Method: SW-846 8270 C				Preparation Method: 3510C			
	<b>Result</b>	<b>Units</b>	<b>RL</b>	<b>Flag</b>	<b>Dil</b>	<b>Prepared</b>	<b>Analyzed</b>	<b>Analyst</b>
Phenol	ND	ug/L	5.0	1		07/25/13	07/25/13 17:32	1014
Pyrene	ND	ug/L	5.0	1		07/25/13	07/25/13 17:32	1014
Pyridine	ND	ug/L	5.0	1		07/25/13	07/25/13 17:32	1014
2,4,6-Trichlorophenol	ND	ug/L	5.0	1		07/25/13	07/25/13 17:32	1014
2,4,5-Trichlorophenol	ND	ug/L	5.0	1		07/25/13	07/25/13 17:32	1014

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 13072314, 13072429, 13072601, 13072911, 13080206

**Whitman, Requardt & Associates, LLP., Fairfax, VA**

August 12, 2013

Project Name: Central Ave.

Project Location: Baltimore, MD

Project ID: 31576-007

<b>Sample ID: CAESB-6</b>		<b>Date/Time Sampled: 07/24/2013 09:00 PSS Sample ID: 13072429-001</b>					
<b>Matrix: GROUND WATER</b>		<b>Date/Time Received: 07/24/2013 16:26</b>					
Dissolved PP Metals		Analytical Method: SW-846 6020 A			Preparation Method: 3005A		
		<b>Result</b>	<b>Units</b>	<b>RL</b>	<b>Flag</b>	<b>Dil</b>	<b>Prepared</b> <b>Analyzed</b> <b>Analyst</b>
Antimony		ND	ug/L	5.0	1	1	07/29/13 07/29/13 16:12 1033
Arsenic		ND	ug/L	1.0	1	1	07/29/13 07/31/13 14:33 1033
Beryllium		ND	ug/L	1.0	1	1	07/29/13 07/31/13 14:33 1033
Cadmium		ND	ug/L	1.0	1	1	07/29/13 07/29/13 16:12 1033
Chromium		ND	ug/L	1.0	1	1	07/29/13 07/31/13 14:33 1033
Copper		ND	ug/L	1.0	1	1	07/29/13 07/31/13 14:33 1033
Lead		ND	ug/L	1.0	1	1	07/29/13 07/29/13 16:12 1033
Mercury		ND	ug/L	0.20	1	1	07/29/13 07/29/13 16:12 1033
Nickel		<b>1.0</b>	ug/L	1.0	1	1	07/29/13 07/31/13 14:33 1033
Selenium		ND	ug/L	1.0	1	1	07/29/13 07/29/13 16:12 1033
Silver		ND	ug/L	1.0	1	1	07/29/13 07/29/13 16:12 1033
Thallium		ND	ug/L	1.0	1	1	07/29/13 07/29/13 16:12 1033
Zinc		ND	ug/L	20	1	1	07/29/13 07/31/13 14:33 1033
Total Petroleum Hydrocarbons - DRO		Analytical Method: SW-846 8015 C			Preparation Method: 3510C		
		<b>Result</b>	<b>Units</b>	<b>RL</b>	<b>Flag</b>	<b>Dil</b>	<b>Prepared</b> <b>Analyzed</b> <b>Analyst</b>
TPH-DRO (Diesel Range Organics)		<b>0.17</b>	mg/L	0.10	1	1	07/26/13 07/26/13 13:34 1040
Total Petroleum Hydrocarbons-GRO		Analytical Method: SW-846 8015C			Preparation Method: 5030B		
		<b>Result</b>	<b>Units</b>	<b>RL</b>	<b>Flag</b>	<b>Dil</b>	<b>Prepared</b> <b>Analyzed</b> <b>Analyst</b>
TPH-GRO (Gasoline Range Organics)		ND	ug/L	100	1	1	07/25/13 07/25/13 14:45 1035

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 13072314, 13072429, 13072601, 13072911, 13080206

**Whitman, Requardt & Associates, LLP., Fairfax, VA**

August 12, 2013

Project Name: Central Ave.

Project Location: Baltimore, MD

Project ID: 31576-007

Sample ID: CAESB-6	Date/Time Sampled: 07/24/2013 09:00 PSS Sample ID: 13072429-001					
Matrix: GROUND WATER	Date/Time Received: 07/24/2013 16:26					
TCL Volatile Organic Compounds	Analytical Method: SW-846 8260 B			Preparation Method: 5030B		
	Result	Units	RL	Flag	Dil	Prepared Analyzed Analyst
Dichlorodifluoromethane	ND	ug/L	1.0	1	1	07/26/13 07/27/13 06:07 1011
Chloromethane	ND	ug/L	1.0	1	1	07/26/13 07/27/13 06:07 1011
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	ug/L	1.0	1	1	07/26/13 07/27/13 06:07 1011
Vinyl Chloride	ND	ug/L	1.0	1	1	07/26/13 07/27/13 06:07 1011
Bromomethane	ND	ug/L	1.0	1	1	07/26/13 07/27/13 06:07 1011
Chloroethane	ND	ug/L	1.0	1	1	07/26/13 07/27/13 06:07 1011
Acetone	12	ug/L	10	1	1	07/26/13 07/27/13 06:07 1011
Cyclohexane	ND	ug/L	10	1	1	07/26/13 07/27/13 06:07 1011
Trichlorofluoromethane	ND	ug/L	5.0	1	1	07/26/13 07/27/13 06:07 1011
1,1-Dichloroethene	ND	ug/L	1.0	1	1	07/26/13 07/27/13 06:07 1011
Methylene Chloride	ND	ug/L	1.0	1	1	07/26/13 07/27/13 06:07 1011
trans-1,2-Dichloroethene	ND	ug/L	1.0	1	1	07/26/13 07/27/13 06:07 1011
Methyl-t-butyl ether	ND	ug/L	1.0	1	1	07/26/13 07/27/13 06:07 1011
1,1-Dichloroethane	ND	ug/L	1.0	1	1	07/26/13 07/27/13 06:07 1011
2-Butanone (MEK)	ND	ug/L	10	1	1	07/26/13 07/27/13 06:07 1011
cis-1,2-Dichloroethene	ND	ug/L	1.0	1	1	07/26/13 07/27/13 06:07 1011
Bromochloromethane	ND	ug/L	1.0	1	1	07/26/13 07/27/13 06:07 1011
Chloroform	ND	ug/L	1.0	1	1	07/26/13 07/27/13 06:07 1011
1,1,1-Trichloroethane	ND	ug/L	1.0	1	1	07/26/13 07/27/13 06:07 1011
1,2-Dichloroethane	ND	ug/L	1.0	1	1	07/26/13 07/27/13 06:07 1011
Carbon Tetrachloride	ND	ug/L	1.0	1	1	07/26/13 07/27/13 06:07 1011
Benzene	ND	ug/L	1.0	1	1	07/26/13 07/27/13 06:07 1011
1,2-Dichloropropane	ND	ug/L	1.0	1	1	07/26/13 07/27/13 06:07 1011
Methyl Acetate	ND	ug/L	10	1	1	07/26/13 07/27/13 06:07 1011
Methylcyclohexane	ND	ug/L	10	1	1	07/26/13 07/27/13 06:07 1011
Trichloroethene	ND	ug/L	1.0	1	1	07/26/13 07/27/13 06:07 1011
Carbon Disulfide	ND	ug/L	10	1	1	07/26/13 07/27/13 06:07 1011
Bromodichloromethane	ND	ug/L	1.0	1	1	07/26/13 07/27/13 06:07 1011
cis-1,3-Dichloropropene	ND	ug/L	1.0	1	1	07/26/13 07/27/13 06:07 1011
4-Methyl-2-Pantanone	ND	ug/L	5.0	1	1	07/26/13 07/27/13 06:07 1011

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 13072314, 13072429, 13072601, 13072911, 13080206

**Whitman, Requardt & Associates, LLP., Fairfax, VA**

August 12, 2013

Project Name: Central Ave.

Project Location: Baltimore, MD

Project ID: 31576-007

Sample ID: CAESB-6	Date/Time Sampled: 07/24/2013 09:00 PSS Sample ID: 13072429-001					
Matrix: GROUND WATER	Date/Time Received: 07/24/2013 16:26					
TCL Volatile Organic Compounds	Analytical Method: SW-846 8260 B			Preparation Method: 5030B		
	Result	Units	RL	Flag	Dil	Prepared Analyzed Analyst
trans-1,3-Dichloropropene	ND	ug/L	1.0	1	1	07/26/13 07/27/13 06:07 1011
1,1,2-Trichloroethane	ND	ug/L	1.0	1	1	07/26/13 07/27/13 06:07 1011
Toluene	ND	ug/L	1.0	1	1	07/26/13 07/27/13 06:07 1011
2-Hexanone	ND	ug/L	10	1	1	07/26/13 07/27/13 06:07 1011
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1	1	07/26/13 07/27/13 06:07 1011
Dibromochloromethane	ND	ug/L	1.0	1	1	07/26/13 07/27/13 06:07 1011
Bromoform	ND	ug/L	5.0	1	1	07/26/13 07/27/13 06:07 1011
Tetrachloroethene	ND	ug/L	1.0	1	1	07/26/13 07/27/13 06:07 1011
Chlorobenzene	ND	ug/L	1.0	1	1	07/26/13 07/27/13 06:07 1011
Ethylbenzene	ND	ug/L	1.0	1	1	07/26/13 07/27/13 06:07 1011
m,p-Xylenes	ND	ug/L	2.0	1	1	07/26/13 07/27/13 06:07 1011
Styrene	ND	ug/L	1.0	1	1	07/26/13 07/27/13 06:07 1011
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1	1	07/26/13 07/27/13 06:07 1011
o-Xylene	ND	ug/L	1.0	1	1	07/26/13 07/27/13 06:07 1011
Isopropylbenzene	ND	ug/L	1.0	1	1	07/26/13 07/27/13 06:07 1011
1,3-Dichlorobenzene	ND	ug/L	1.0	1	1	07/26/13 07/27/13 06:07 1011
1,4-Dichlorobenzene	ND	ug/L	1.0	1	1	07/26/13 07/27/13 06:07 1011
1,2-Dichlorobenzene	ND	ug/L	1.0	1	1	07/26/13 07/27/13 06:07 1011
1,2-Dibromo-3-Chloropropane	ND	ug/L	10	1	1	07/26/13 07/27/13 06:07 1011
1,2,4-Trichlorobenzene	ND	ug/L	1.0	1	1	07/26/13 07/27/13 06:07 1011
Naphthalene	ND	ug/L	1.0	1	1	07/26/13 07/27/13 06:07 1011
1,2,3-Trichlorobenzene	ND	ug/L	1.0	1	1	07/26/13 07/27/13 06:07 1011

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 13072314, 13072429, 13072601, 13072911, 13080206

**Whitman, Requardt & Associates, LLP., Fairfax, VA**

August 12, 2013

Project Name: Central Ave.

Project Location: Baltimore, MD

Project ID: 31576-007

<b>Sample ID: CAESB-6</b>		<b>Date/Time Sampled: 07/24/2013 09:00</b>				<b>PSS Sample ID: 13072429-001</b>		
<b>Matrix: GROUND WATER</b>		<b>Date/Time Received: 07/24/2013 16:26</b>						
TCL Semivolatile Organic Compounds		Analytical Method: SW-846 8270 C				Preparation Method: 3510C		
		<b>Result</b>	<b>Units</b>	<b>RL</b>	<b>Flag</b>	<b>Dil</b>	<b>Prepared</b>	<b>Analyzed</b>
Acenaphthene		ND	ug/L	5.0	1	1	07/25/13	07/25/13 18:59
Acenaphthylene		ND	ug/L	5.0	1	1	07/25/13	07/25/13 18:59
Acetophenone		ND	ug/L	5.0	1	1	07/25/13	07/25/13 18:59
Anthracene		ND	ug/L	5.0	1	1	07/25/13	07/25/13 18:59
Caprolactam		ND	ug/L	5.0	1	1	07/25/13	07/25/13 18:59
Biphenyl (Diphenyl)		ND	ug/L	5.0	1	1	07/25/13	07/25/13 18:59
Atrazine		ND	ug/L	5.0	1	1	07/25/13	07/25/13 18:59
Benzo(a)anthracene		ND	ug/L	5.0	1	1	07/25/13	07/25/13 18:59
Benzo(a)pyrene		ND	ug/L	5.0	1	1	07/25/13	07/25/13 18:59
Benzo(b)fluoranthene		ND	ug/L	5.0	1	1	07/25/13	07/25/13 18:59
Benzo(g,h,i)perylene		ND	ug/L	5.0	1	1	07/25/13	07/25/13 18:59
Benzo(k)fluoranthene		ND	ug/L	5.0	1	1	07/25/13	07/25/13 18:59
Butyl benzyl phthalate		ND	ug/L	5.0	1	1	07/25/13	07/25/13 18:59
bis(2-chloroethoxy) methane		ND	ug/L	5.0	1	1	07/25/13	07/25/13 18:59
bis(2-chloroethyl) ether		ND	ug/L	5.0	1	1	07/25/13	07/25/13 18:59
bis(2-chloroisopropyl) ether		ND	ug/L	5.0	1	1	07/25/13	07/25/13 18:59
bis(2-ethylhexyl) phthalate		ND	ug/L	5.0	1	1	07/25/13	07/25/13 18:59
4-Bromophenylphenyl ether		ND	ug/L	5.0	1	1	07/25/13	07/25/13 18:59
Di-n-butyl phthalate		ND	ug/L	5.0	1	1	07/25/13	07/25/13 18:59
Carbazole		ND	ug/L	5.0	1	1	07/25/13	07/25/13 18:59
4-Chloro-3-methyl phenol		ND	ug/L	5.0	1	1	07/25/13	07/25/13 18:59
4-Chloroaniline		ND	ug/L	10	1	1	07/25/13	07/25/13 18:59
2-Chloronaphthalene		ND	ug/L	5.0	1	1	07/25/13	07/25/13 18:59
2-Chlorophenol		ND	ug/L	5.0	1	1	07/25/13	07/25/13 18:59
4-Chlorophenyl Phenyl ether		ND	ug/L	5.0	1	1	07/25/13	07/25/13 18:59
Chrysene		ND	ug/L	5.0	1	1	07/25/13	07/25/13 18:59
Dibenz(a,h)Anthracene		ND	ug/L	5.0	1	1	07/25/13	07/25/13 18:59
Dibenzofuran		ND	ug/L	5.0	1	1	07/25/13	07/25/13 18:59
3,3-Dichlorobenzidine		ND	ug/L	5.0	1	1	07/25/13	07/25/13 18:59
2,4-Dichlorophenol		ND	ug/L	5.0	1	1	07/25/13	07/25/13 18:59

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 13072314, 13072429, 13072601, 13072911, 13080206

**Whitman, Requardt & Associates, LLP., Fairfax, VA**

August 12, 2013

Project Name: Central Ave.

Project Location: Baltimore, MD

Project ID: 31576-007

<b>Sample ID: CAESB-6</b>		<b>Date/Time Sampled: 07/24/2013 09:00</b>				<b>PSS Sample ID: 13072429-001</b>		
<b>Matrix: GROUND WATER</b>		<b>Date/Time Received: 07/24/2013 16:26</b>						
TCL Semivolatile Organic Compounds		Analytical Method: SW-846 8270 C				Preparation Method: 3510C		
		<b>Result</b>	<b>Units</b>	<b>RL</b>	<b>Flag</b>	<b>Dil</b>	<b>Prepared</b>	<b>Analyzed</b>
Diethyl phthalate		ND	ug/L	5.0	1	1	07/25/13	07/25/13 18:59
Dimethyl phthalate		ND	ug/L	5.0	1	1	07/25/13	07/25/13 18:59
2,4-Dimethylphenol		ND	ug/L	5.0	1	1	07/25/13	07/25/13 18:59
4,6-Dinitro-2-methyl phenol		ND	ug/L	5.0	1	1	07/25/13	07/25/13 18:59
2,4-Dinitrophenol		ND	ug/L	10	1	1	07/25/13	07/25/13 18:59
2,4-Dinitrotoluene		ND	ug/L	5.0	1	1	07/25/13	07/25/13 18:59
2,6-Dinitrotoluene		ND	ug/L	5.0	1	1	07/25/13	07/25/13 18:59
Fluoranthene		ND	ug/L	5.0	1	1	07/25/13	07/25/13 18:59
Fluorene		ND	ug/L	5.0	1	1	07/25/13	07/25/13 18:59
Hexachlorobenzene		ND	ug/L	5.0	1	1	07/25/13	07/25/13 18:59
Hexachlorobutadiene		ND	ug/L	5.0	1	1	07/25/13	07/25/13 18:59
Hexachlorocyclopentadiene		ND	ug/L	5.0	1	1	07/25/13	07/25/13 18:59
Hexachloroethane		ND	ug/L	5.0	1	1	07/25/13	07/25/13 18:59
Indeno(1,2,3-c,d)Pyrene		ND	ug/L	5.0	1	1	07/25/13	07/25/13 18:59
Isophorone		ND	ug/L	5.0	1	1	07/25/13	07/25/13 18:59
2-Methylnaphthalene		ND	ug/L	5.0	1	1	07/25/13	07/25/13 18:59
2-Methyl phenol		ND	ug/L	5.0	1	1	07/25/13	07/25/13 18:59
3&4-Methylphenol		ND	ug/L	5.0	1	1	07/25/13	07/25/13 18:59
Naphthalene		ND	ug/L	5.0	1	1	07/25/13	07/25/13 18:59
4-Nitroaniline		ND	ug/L	10	1	1	07/25/13	07/25/13 18:59
3-Nitroaniline		ND	ug/L	5.0	1	1	07/25/13	07/25/13 18:59
2-Nitroaniline		ND	ug/L	5.0	1	1	07/25/13	07/25/13 18:59
Nitrobenzene		ND	ug/L	5.0	1	1	07/25/13	07/25/13 18:59
2-Nitrophenol		ND	ug/L	5.0	1	1	07/25/13	07/25/13 18:59
4-Nitrophenol		ND	ug/L	5.0	1	1	07/25/13	07/25/13 18:59
N-Nitrosodi-n-propyl amine		ND	ug/L	5.0	1	1	07/25/13	07/25/13 18:59
N-Nitrosodiphenylamine		ND	ug/L	5.0	1	1	07/25/13	07/25/13 18:59
Di-n-octyl phthalate		ND	ug/L	10	1	1	07/25/13	07/25/13 18:59
Pentachlorophenol		ND	ug/L	10	1	1	07/25/13	07/25/13 18:59
Phenanthrene		ND	ug/L	5.0	1	1	07/25/13	07/25/13 18:59

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 13072314, 13072429, 13072601, 13072911, 13080206

**Whitman, Requardt & Associates, LLP., Fairfax, VA**

August 12, 2013

Project Name: Central Ave.

Project Location: Baltimore, MD

Project ID: 31576-007

<b>Sample ID: CAESB-6</b>	<b>Date/Time Sampled: 07/24/2013 09:00 PSS Sample ID: 13072429-001</b>					
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<b>Matrix: GROUND WATER</b>	<b>Date/Time Received: 07/24/2013 16:26</b>					
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TCL Semivolatile Organic Compounds	Analytical Method: SW-846 8270 C				Preparation Method: 3510C		
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	<b>Result</b>	<b>Units</b>	<b>RL</b>	<b>Flag</b>	<b>Dil</b>	<b>Prepared</b>	<b>Analyzed</b>	<b>Analyst</b>
Phenol	ND	ug/L	5.0	1	1	07/25/13	07/25/13 18:59	1014
Pyrene	ND	ug/L	5.0	1	1	07/25/13	07/25/13 18:59	1014
Pyridine	ND	ug/L	5.0	1	1	07/25/13	07/25/13 18:59	1014
2,4,6-Trichlorophenol	ND	ug/L	5.0	1	1	07/25/13	07/25/13 18:59	1014
2,4,5-Trichlorophenol	ND	ug/L	5.0	1	1	07/25/13	07/25/13 18:59	1014

<b>Sample ID: CAESB-5A 2-10'</b>	<b>Date/Time Sampled: 07/24/2013 13:00 PSS Sample ID: 13072429-002</b>					
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<b>Matrix: SOIL</b>	<b>Date/Time Received: 07/24/2013 16:26 % Solids: 89</b>					
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PP Metals	Analytical Method: SW-846 6020 A				Preparation Method: 3050B		
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	<b>Result</b>	<b>Units</b>	<b>RL</b>	<b>Flag</b>	<b>Dil</b>	<b>Prepared</b>	<b>Analyzed</b>	<b>Analyst</b>
Antimony	ND	mg/kg	2.0	1	1	07/26/13	07/29/13 16:56	1034
Arsenic	<b>2.7</b>	mg/kg	0.40	1	1	07/26/13	07/29/13 16:56	1034
Beryllium	ND	mg/kg	2.0	1	1	07/26/13	07/30/13 15:27	1034
Cadmium	ND	mg/kg	2.0	1	1	07/26/13	07/29/13 16:56	1034
Chromium	<b>34</b>	mg/kg	2.0	1	1	07/26/13	07/29/13 16:56	1034
Copper	<b>14</b>	mg/kg	2.0	1	1	07/26/13	07/29/13 16:56	1034
Lead	<b>19</b>	mg/kg	2.0	1	1	07/26/13	07/29/13 16:56	1034
Mercury	ND	mg/kg	0.080	1	1	07/26/13	07/29/13 16:56	1034
Nickel	<b>15</b>	mg/kg	2.0	1	1	07/26/13	07/29/13 16:56	1034
Selenium	ND	mg/kg	2.0	1	1	07/26/13	07/29/13 16:56	1034
Silver	ND	mg/kg	2.0	1	1	07/26/13	07/29/13 16:56	1034
Thallium	ND	mg/kg	1.6	1	1	07/26/13	07/29/13 16:56	1034
Zinc	<b>32</b>	mg/kg	8.0	1	1	07/26/13	07/29/13 16:56	1034

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 13072314, 13072429, 13072601, 13072911, 13080206

**Whitman, Requardt & Associates, LLP., Fairfax, VA**

August 12, 2013

Project Name: Central Ave.

Project Location: Baltimore, MD

Project ID: 31576-007

<b>Sample ID: CAESB-5A 10-20'</b>	<b>Date/Time Sampled: 07/24/2013 13:00</b>				<b>PSS Sample ID: 13072429-003</b>			
<b>Matrix: SOIL</b>	<b>Date/Time Received: 07/24/2013 16:26</b>				<b>% Solids: 91</b>			
PP Metals	Analytical Method: SW-846 6020 A				Preparation Method: 3050B			
	<b>Result</b>	<b>Units</b>	<b>RL</b>	<b>Flag</b>	<b>Dil</b>	<b>Prepared</b>	<b>Analyzed</b>	<b>Analyst</b>
Antimony	ND	mg/kg	2.4	1		07/26/13	07/29/13 17:02	1034
Arsenic	<b>0.67</b>	mg/kg	0.49	1		07/26/13	07/29/13 17:02	1034
Beryllium	ND	mg/kg	2.4	1		07/26/13	07/30/13 15:33	1034
Cadmium	ND	mg/kg	2.4	1		07/26/13	07/29/13 17:02	1034
Chromium	<b>16</b>	mg/kg	2.4	1		07/26/13	07/29/13 17:02	1034
Copper	<b>5.6</b>	mg/kg	2.4	1		07/26/13	07/29/13 17:02	1034
Lead	<b>2.6</b>	mg/kg	2.4	1		07/26/13	07/29/13 17:02	1034
Mercury	ND	mg/kg	0.098	1		07/26/13	07/29/13 17:02	1034
Nickel	<b>5.3</b>	mg/kg	2.4	1		07/26/13	07/29/13 17:02	1034
Selenium	ND	mg/kg	2.4	1		07/26/13	07/29/13 17:02	1034
Silver	ND	mg/kg	2.4	1		07/26/13	07/29/13 17:02	1034
Thallium	ND	mg/kg	2.0	1		07/26/13	07/29/13 17:02	1034
Zinc	<b>26</b>	mg/kg	9.8	1		07/26/13	07/29/13 17:02	1034

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## CERTIFICATE OF ANALYSIS

No: 13072314, 13072429, 13072601, 13072911, 13080206

**Whitman, Requardt & Associates, LLP., Fairfax, VA**

August 12, 2013

Project Name: Central Ave.

Project Location: Baltimore, MD

Project ID: 31576-007

<b>Sample ID: CAESB-5A 6-8'</b>	<b>Date/Time Sampled: 07/24/2013 13:00</b>				<b>PSS Sample ID: 13072429-004</b>			
<b>Matrix: SOIL</b>	<b>Date/Time Received: 07/24/2013 16:26</b>				<b>% Solids: 84</b>			
Total Petroleum Hydrocarbons - DRO	Analytical Method: SW-846 8015 C				Preparation Method: 3550			
	<b>Result</b>	<b>Units</b>	<b>RL</b>	<b>Flag</b>	<b>Dil</b>	<b>Prepared</b>	<b>Analyzed</b>	<b>Analyst</b>
TPH-DRO (Diesel Range Organics)	ND	mg/kg	4.7		1	07/25/13	07/26/13 00:28	1040
Total Petroleum Hydrocarbons-GRO	Analytical Method: SW-846 8015C				Preparation Method: 5030			
	<b>Result</b>	<b>Units</b>	<b>RL</b>	<b>Flag</b>	<b>Dil</b>	<b>Prepared</b>	<b>Analyzed</b>	<b>Analyst</b>
TPH-GRO (Gasoline Range Organics)	ND	ug/kg	120		1	07/25/13	07/25/13 12:45	1035

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August 12, 2013

Project Name: Central Ave.

Project Location: Baltimore, MD

Project ID: 31576-007

Sample ID: CAESB-5A 6-8'	Date/Time Sampled: 07/24/2013 13:00				PSS Sample ID: 13072429-004			
Matrix: SOIL	Date/Time Received: 07/24/2013 16:26				% Solids: 84			
TCL Volatile Organic Compounds	Analytical Method: SW-846 8260 B				Preparation Method: 5030			
	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Dichlorodifluoromethane	ND	ug/kg	6.1	1	1	07/26/13	07/26/13 19:09	1011
Chloromethane	ND	ug/kg	6.1	1	1	07/26/13	07/26/13 19:09	1011
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	ug/kg	6.1	1	1	07/26/13	07/26/13 19:09	1011
Vinyl Chloride	ND	ug/kg	6.1	1	1	07/26/13	07/26/13 19:09	1011
Bromomethane	ND	ug/kg	6.1	1	1	07/26/13	07/26/13 19:09	1011
Chloroethane	ND	ug/kg	6.1	1	1	07/26/13	07/26/13 19:09	1011
Acetone	ND	ug/kg	24	1	1	07/26/13	07/26/13 19:09	1011
Cyclohexane	ND	ug/kg	24	1	1	07/26/13	07/26/13 19:09	1011
Trichlorofluoromethane	ND	ug/kg	6.1	1	1	07/26/13	07/26/13 19:09	1011
1,1-Dichloroethene	ND	ug/kg	6.1	1	1	07/26/13	07/26/13 19:09	1011
Methylene Chloride	ND	ug/kg	6.1	1	1	07/26/13	07/26/13 19:09	1011
trans-1,2-Dichloroethene	ND	ug/kg	6.1	1	1	07/26/13	07/26/13 19:09	1011
Methyl-t-butyl ether	ND	ug/kg	6.1	1	1	07/26/13	07/26/13 19:09	1011
1,1-Dichloroethane	ND	ug/kg	6.1	1	1	07/26/13	07/26/13 19:09	1011
2-Butanone (MEK)	ND	ug/kg	24	1	1	07/26/13	07/26/13 19:09	1011
cis-1,2-Dichloroethene	ND	ug/kg	6.1	1	1	07/26/13	07/26/13 19:09	1011
Bromochloromethane	ND	ug/kg	6.1	1	1	07/26/13	07/26/13 19:09	1011
Chloroform	ND	ug/kg	6.1	1	1	07/26/13	07/26/13 19:09	1011
1,1,1-Trichloroethane	ND	ug/kg	6.1	1	1	07/26/13	07/26/13 19:09	1011
1,2-Dichloroethane	ND	ug/kg	6.1	1	1	07/26/13	07/26/13 19:09	1011
Carbon Tetrachloride	ND	ug/kg	6.1	1	1	07/26/13	07/26/13 19:09	1011
Benzene	ND	ug/kg	6.1	1	1	07/26/13	07/26/13 19:09	1011
1,2-Dichloropropane	ND	ug/kg	6.1	1	1	07/26/13	07/26/13 19:09	1011
Carbon Disulfide	ND	ug/kg	12	1	1	07/26/13	07/26/13 19:09	1011
Methylcyclohexane	ND	ug/kg	24	1	1	07/26/13	07/26/13 19:09	1011
Trichloroethene	ND	ug/kg	6.1	1	1	07/26/13	07/26/13 19:09	1011
Methyl Acetate	ND	ug/kg	24	1	1	07/26/13	07/26/13 19:09	1011
Bromodichloromethane	ND	ug/kg	6.1	1	1	07/26/13	07/26/13 19:09	1011
cis-1,3-Dichloropropene	ND	ug/kg	6.1	1	1	07/26/13	07/26/13 19:09	1011
4-Methyl-2-Pantanone	ND	ug/kg	24	1	1	07/26/13	07/26/13 19:09	1011

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 13072314, 13072429, 13072601, 13072911, 13080206

**Whitman, Requardt & Associates, LLP., Fairfax, VA**

August 12, 2013

Project Name: Central Ave.

Project Location: Baltimore, MD

Project ID: 31576-007

Sample ID: CAESB-5A 6-8'	Date/Time Sampled: 07/24/2013 13:00	PSS Sample ID: 13072429-004
Matrix: SOIL	Date/Time Received: 07/24/2013 16:26	% Solids: 84
TCL Volatile Organic Compounds	Analytical Method: SW-846 8260 B	Preparation Method: 5030
trans-1,3-Dichloropropene	ND ug/kg	6.1 1 07/26/13 07/26/13 19:09 1011
1,1,2-Trichloroethane	ND ug/kg	6.1 1 07/26/13 07/26/13 19:09 1011
Toluene	ND ug/kg	6.1 1 07/26/13 07/26/13 19:09 1011
2-Hexanone	ND ug/kg	24 1 07/26/13 07/26/13 19:09 1011
1,2-Dibromoethane (EDB)	ND ug/kg	6.1 1 07/26/13 07/26/13 19:09 1011
Dibromochloromethane	ND ug/kg	6.1 1 07/26/13 07/26/13 19:09 1011
Bromoform	ND ug/kg	6.1 1 07/26/13 07/26/13 19:09 1011
Tetrachloroethene	ND ug/kg	6.1 1 07/26/13 07/26/13 19:09 1011
Chlorobenzene	ND ug/kg	6.1 1 07/26/13 07/26/13 19:09 1011
Ethylbenzene	ND ug/kg	6.1 1 07/26/13 07/26/13 19:09 1011
m,p-Xylenes	ND ug/kg	12 1 07/26/13 07/26/13 19:09 1011
Styrene	ND ug/kg	6.1 1 07/26/13 07/26/13 19:09 1011
1,1,2,2-Tetrachloroethane	ND ug/kg	6.1 1 07/26/13 07/26/13 19:09 1011
o-Xylene	ND ug/kg	6.1 1 07/26/13 07/26/13 19:09 1011
Isopropylbenzene	ND ug/kg	6.1 1 07/26/13 07/26/13 19:09 1011
1,3-Dichlorobenzene	ND ug/kg	6.1 1 07/26/13 07/26/13 19:09 1011
1,4-Dichlorobenzene	ND ug/kg	6.1 1 07/26/13 07/26/13 19:09 1011
1,2-Dichlorobenzene	ND ug/kg	6.1 1 07/26/13 07/26/13 19:09 1011
1,2-Dibromo-3-Chloropropane	ND ug/kg	49 1 07/26/13 07/26/13 19:09 1011
1,2,4-Trichlorobenzene	ND ug/kg	6.1 1 07/26/13 07/26/13 19:09 1011
Naphthalene	ND ug/kg	6.1 1 07/26/13 07/26/13 19:09 1011
1,2,3-Trichlorobenzene	ND ug/kg	6.1 1 07/26/13 07/26/13 19:09 1011

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 13072314, 13072429, 13072601, 13072911, 13080206

**Whitman, Requardt & Associates, LLP., Fairfax, VA**

August 12, 2013

Project Name: Central Ave.

Project Location: Baltimore, MD

Project ID: 31576-007

Sample ID: CAESB-5A 6-8'	Date/Time Sampled: 07/24/2013 13:00				PSS Sample ID: 13072429-004			
Matrix: SOIL	Date/Time Received: 07/24/2013 16:26				% Solids: 84			
TCL Semivolatile Organic Compounds	Analytical Method: SW-846 8270 C				Preparation Method: 3550			
	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Acenaphthene	ND	ug/kg	200	1	1	07/26/13	07/26/13 18:27	1014
Acenaphthylene	ND	ug/kg	200	1	1	07/26/13	07/26/13 18:27	1014
Acetophenone	ND	ug/kg	200	1	1	07/26/13	07/26/13 18:27	1014
Anthracene	ND	ug/kg	200	1	1	07/26/13	07/26/13 18:27	1014
Benzo(a)anthracene	ND	ug/kg	200	1	1	07/26/13	07/26/13 18:27	1014
Benzo(a)pyrene	ND	ug/kg	200	1	1	07/26/13	07/26/13 18:27	1014
Benzo(b)fluoranthene	ND	ug/kg	200	1	1	07/26/13	07/26/13 18:27	1014
Benzo(g,h,i)perylene	ND	ug/kg	200	1	1	07/26/13	07/26/13 18:27	1014
Benzo(k)fluoranthene	ND	ug/kg	200	1	1	07/26/13	07/26/13 18:27	1014
Biphenyl (Diphenyl)	ND	ug/kg	200	1	1	07/26/13	07/26/13 18:27	1014
Butyl benzyl phthalate	ND	ug/kg	200	1	1	07/26/13	07/26/13 18:27	1014
bis(2-chloroethoxy) methane	ND	ug/kg	200	1	1	07/26/13	07/26/13 18:27	1014
bis(2-chloroethyl) ether	ND	ug/kg	200	1	1	07/26/13	07/26/13 18:27	1014
bis(2-chloroisopropyl) ether	ND	ug/kg	200	1	1	07/26/13	07/26/13 18:27	1014
bis(2-ethylhexyl) phthalate	ND	ug/kg	200	1	1	07/26/13	07/26/13 18:27	1014
4-Bromophenylphenyl ether	ND	ug/kg	200	1	1	07/26/13	07/26/13 18:27	1014
Di-n-butyl phthalate	ND	ug/kg	390	1	1	07/26/13	07/26/13 18:27	1014
Carbazole	ND	ug/kg	200	1	1	07/26/13	07/26/13 18:27	1014
4-Chloro-3-methyl phenol	ND	ug/kg	200	1	1	07/26/13	07/26/13 18:27	1014
4-Chloroaniline	ND	ug/kg	390	1	1	07/26/13	07/26/13 18:27	1014
2-Chloronaphthalene	ND	ug/kg	200	1	1	07/26/13	07/26/13 18:27	1014
2-Chlorophenol	ND	ug/kg	200	1	1	07/26/13	07/26/13 18:27	1014
4-Chlorophenyl Phenyl ether	ND	ug/kg	200	1	1	07/26/13	07/26/13 18:27	1014
Chrysene	ND	ug/kg	200	1	1	07/26/13	07/26/13 18:27	1014
Dibenz(a,h)Anthracene	ND	ug/kg	200	1	1	07/26/13	07/26/13 18:27	1014
Dibenzofuran	ND	ug/kg	200	1	1	07/26/13	07/26/13 18:27	1014
3,3-Dichlorobenzidine	ND	ug/kg	200	1	1	07/26/13	07/26/13 18:27	1014
2,4-Dichlorophenol	ND	ug/kg	200	1	1	07/26/13	07/26/13 18:27	1014
Diethyl phthalate	ND	ug/kg	200	1	1	07/26/13	07/26/13 18:27	1014
Dimethyl phthalate	ND	ug/kg	200	1	1	07/26/13	07/26/13 18:27	1014

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August 12, 2013

Project Name: Central Ave.

Project Location: Baltimore, MD

Project ID: 31576-007

Sample ID: CAESB-5A 6-8'	Date/Time Sampled: 07/24/2013 13:00				PSS Sample ID: 13072429-004			
Matrix: SOIL	Date/Time Received: 07/24/2013 16:26				% Solids: 84			
TCL Semivolatile Organic Compounds	Analytical Method: SW-846 8270 C				Preparation Method: 3550			
	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
2,4-Dimethylphenol	ND	ug/kg	200	1		07/26/13	07/26/13 18:27	1014
4,6-Dinitro-2-methyl phenol	ND	ug/kg	200	1		07/26/13	07/26/13 18:27	1014
2,4-Dinitrophenol	ND	ug/kg	390	1		07/26/13	07/26/13 18:27	1014
2,4-Dinitrotoluene	ND	ug/kg	200	1		07/26/13	07/26/13 18:27	1014
2,6-Dinitrotoluene	ND	ug/kg	200	1		07/26/13	07/26/13 18:27	1014
Fluoranthene	ND	ug/kg	200	1		07/26/13	07/26/13 18:27	1014
Fluorene	ND	ug/kg	200	1		07/26/13	07/26/13 18:27	1014
Hexachlorobenzene	ND	ug/kg	200	1		07/26/13	07/26/13 18:27	1014
Hexachlorobutadiene	ND	ug/kg	200	1		07/26/13	07/26/13 18:27	1014
Hexachlorocyclopentadiene	ND	ug/kg	200	1		07/26/13	07/26/13 18:27	1014
Hexachloroethane	ND	ug/kg	200	1		07/26/13	07/26/13 18:27	1014
Indeno(1,2,3-c,d)Pyrene	ND	ug/kg	200	1		07/26/13	07/26/13 18:27	1014
Isophorone	ND	ug/kg	200	1		07/26/13	07/26/13 18:27	1014
2-Methylnaphthalene	ND	ug/kg	200	1		07/26/13	07/26/13 18:27	1014
2-Methyl phenol	ND	ug/kg	200	1		07/26/13	07/26/13 18:27	1014
3&4-Methylphenol	ND	ug/kg	200	1		07/26/13	07/26/13 18:27	1014
Naphthalene	ND	ug/kg	200	1		07/26/13	07/26/13 18:27	1014
4-Nitroaniline	ND	ug/kg	200	1		07/26/13	07/26/13 18:27	1014
3-Nitroaniline	ND	ug/kg	200	1		07/26/13	07/26/13 18:27	1014
2-Nitroaniline	ND	ug/kg	390	1		07/26/13	07/26/13 18:27	1014
Nitrobenzene	ND	ug/kg	200	1		07/26/13	07/26/13 18:27	1014
2-Nitrophenol	ND	ug/kg	200	1		07/26/13	07/26/13 18:27	1014
4-Nitrophenol	ND	ug/kg	200	1		07/26/13	07/26/13 18:27	1014
N-Nitrosodi-n-propyl amine	ND	ug/kg	200	1		07/26/13	07/26/13 18:27	1014
N-Nitrosodiphenylamine	ND	ug/kg	200	1		07/26/13	07/26/13 18:27	1014
Di-n-octyl phthalate	ND	ug/kg	200	1		07/26/13	07/26/13 18:27	1014
Pentachlorophenol	ND	ug/kg	390	1		07/26/13	07/26/13 18:27	1014
Phenanthrene	ND	ug/kg	200	1		07/26/13	07/26/13 18:27	1014
Phenol	ND	ug/kg	200	1		07/26/13	07/26/13 18:27	1014
Atrazine	ND	ug/kg	200	1		07/26/13	07/26/13 18:27	1014

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**FAX 410-788-8723**

# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 13072314, 13072429, 13072601, 13072911, 13080206

**Whitman, Requardt & Associates, LLP., Fairfax, VA**

August 12, 2013

Project Name: Central Ave.

Project Location: Baltimore, MD

Project ID: 31576-007

<b>Sample ID: CAESB-5A 6-8'</b>	<b>Date/Time Sampled: 07/24/2013 13:00 PSS Sample ID: 13072429-004</b>						
<b>Matrix: SOIL</b>	<b>Date/Time Received: 07/24/2013 16:26</b>			<b>% Solids: 84</b>			
TCL Semivolatile Organic Compounds	Analytical Method: SW-846 8270 C			Preparation Method: 3550			
	<b>Result</b>	<b>Units</b>	<b>RL</b>	<b>Flag</b>	<b>Dil</b>	<b>Prepared</b>	<b>Analyzed</b>
Pyrene	ND	ug/kg	200	1	1	07/26/13	07/26/13 18:27 1014
Pyridine	ND	ug/kg	200	1	1	07/26/13	07/26/13 18:27 1014
Caprolactam	ND	ug/kg	200	1	1	07/26/13	07/26/13 18:27 1014
2,4,6-Trichlorophenol	ND	ug/kg	200	1	1	07/26/13	07/26/13 18:27 1014
2,4,5-Trichlorophenol	ND	ug/kg	200	1	1	07/26/13	07/26/13 18:27 1014
<b>Sample ID: CAESB-7 2-10'</b>	<b>Date/Time Sampled: 07/24/2013 15:30 PSS Sample ID: 13072429-005</b>						
<b>Matrix: SOIL</b>	<b>Date/Time Received: 07/24/2013 16:26</b>			<b>% Solids: 84</b>			
PP Metals	Analytical Method: SW-846 6020 A			Preparation Method: 3050B			
	<b>Result</b>	<b>Units</b>	<b>RL</b>	<b>Flag</b>	<b>Dil</b>	<b>Prepared</b>	<b>Analyzed</b>
Antimony	ND	mg/kg	2.4	1	1	07/26/13	07/29/13 17:08 1034
Arsenic	3.4	mg/kg	0.48	1	1	07/26/13	07/29/13 17:08 1034
Beryllium	ND	mg/kg	2.4	1	1	07/26/13	07/30/13 15:39 1034
Cadmium	ND	mg/kg	2.4	1	1	07/26/13	07/29/13 17:08 1034
Chromium	25	mg/kg	2.4	1	1	07/26/13	07/29/13 17:08 1034
Copper	12	mg/kg	2.4	1	1	07/26/13	07/29/13 17:08 1034
Lead	15	mg/kg	2.4	1	1	07/26/13	07/29/13 17:08 1034
Mercury	0.11	mg/kg	0.096	1	1	07/26/13	07/29/13 17:08 1034
Nickel	11	mg/kg	2.4	1	1	07/26/13	07/29/13 17:08 1034
Selenium	ND	mg/kg	2.4	1	1	07/26/13	07/29/13 17:08 1034
Silver	ND	mg/kg	2.4	1	1	07/26/13	07/29/13 17:08 1034
Thallium	ND	mg/kg	1.9	1	1	07/26/13	07/29/13 17:08 1034
Zinc	24	mg/kg	9.6	1	1	07/26/13	07/29/13 17:08 1034

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# **PHASE SEPARATION SCIENCE, INC.**



## CERTIFICATE OF ANALYSIS

No: 13072314, 13072429, 13072601, 13072911, 13080206

**Whitman, Requardt & Associates, LLP., Fairfax, VA**

August 12, 2013

Project Name: Central Ave.

Project Location: Baltimore, MD

Project ID: 31576-007

<b>Sample ID: CAESB-7 10-20'</b>	<b>Date/Time Sampled: 07/24/2013 15:30</b>				<b>PSS Sample ID: 13072429-006</b>			
<b>Matrix: SOIL</b>	<b>Date/Time Received: 07/24/2013 16:26</b>				<b>% Solids: 75</b>			
PP Metals	Analytical Method: SW-846 6020 A				Preparation Method: 3050B			
	<b>Result</b>	<b>Units</b>	<b>RL</b>	<b>Flag</b>	<b>Dil</b>	<b>Prepared</b>	<b>Analyzed</b>	<b>Analyst</b>
Antimony	ND	mg/kg	2.9	1		07/26/13	07/29/13 17:14	1034
Arsenic	<b>1.1</b>	mg/kg	0.57	1		07/26/13	07/29/13 17:14	1034
Beryllium	ND	mg/kg	2.9	1		07/26/13	07/30/13 15:45	1034
Cadmium	ND	mg/kg	2.9	1		07/26/13	07/29/13 17:14	1034
Chromium	<b>16</b>	mg/kg	2.9	1		07/26/13	07/29/13 17:14	1034
Copper	<b>5.7</b>	mg/kg	2.9	1		07/26/13	07/29/13 17:14	1034
Lead	<b>4.7</b>	mg/kg	2.9	1		07/26/13	07/29/13 17:14	1034
Mercury	ND	mg/kg	0.11	1		07/26/13	07/29/13 17:14	1034
Nickel	<b>7.1</b>	mg/kg	2.9	1		07/26/13	07/29/13 17:14	1034
Selenium	ND	mg/kg	2.9	1		07/26/13	07/29/13 17:14	1034
Silver	ND	mg/kg	2.9	1		07/26/13	07/29/13 17:14	1034
Thallium	ND	mg/kg	2.3	1		07/26/13	07/29/13 17:14	1034
Zinc	<b>12</b>	mg/kg	11	1		07/26/13	07/29/13 17:14	1034

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## CERTIFICATE OF ANALYSIS

No: 13072314, 13072429, 13072601, 13072911, 13080206

**Whitman, Requardt & Associates, LLP., Fairfax, VA**

August 12, 2013

Project Name: Central Ave.

Project Location: Baltimore, MD

Project ID: 31576-007

<b>Sample ID: CAESB-7 6-8</b>	<b>Date/Time Sampled: 07/24/2013 15:30</b>			<b>PSS Sample ID: 13072429-007</b>				
<b>Matrix: SOIL</b>	<b>Date/Time Received: 07/24/2013 16:26</b>			<b>% Solids: 78</b>				
Total Petroleum Hydrocarbons - DRO	Analytical Method: SW-846 8015 C			Preparation Method: 3550				
	<b>Result</b>	<b>Units</b>	<b>RL</b>	<b>Flag</b>	<b>Dil</b>	<b>Prepared</b>	<b>Analyzed</b>	<b>Analyst</b>
TPH-DRO (Diesel Range Organics)	ND	mg/kg	5.1		1	07/25/13	07/26/13 10:54	1040
Total Petroleum Hydrocarbons-GRO	Analytical Method: SW-846 8015C			Preparation Method: 5030				
	<b>Result</b>	<b>Units</b>	<b>RL</b>	<b>Flag</b>	<b>Dil</b>	<b>Prepared</b>	<b>Analyzed</b>	<b>Analyst</b>
TPH-GRO (Gasoline Range Organics)	ND	ug/kg	130		1	07/25/13	07/25/13 13:12	1035

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August 12, 2013

Project Name: Central Ave.

Project Location: Baltimore, MD

Project ID: 31576-007

<b>Sample ID: CAESB-7 6-8</b>		<b>Date/Time Sampled: 07/24/2013 15:30</b>			<b>PSS Sample ID: 13072429-007</b>		
<b>Matrix: SOIL</b>		<b>Date/Time Received: 07/24/2013 16:26</b>			<b>% Solids: 78</b>		
TCL Volatile Organic Compounds		Analytical Method: SW-846 8260 B			Preparation Method: 5030		
		<b>Result</b>	<b>Units</b>	<b>RL</b>	<b>Flag</b>	<b>Dil</b>	<b>Prepared</b>
Dichlorodifluoromethane		ND	ug/kg	6.4		1	07/26/13 07/26/13 19:36
Chloromethane		ND	ug/kg	6.4		1	07/26/13 07/26/13 19:36
1,1,2-Trichloro-1,2,2-Trifluoroethane		ND	ug/kg	6.4		1	07/26/13 07/26/13 19:36
Vinyl Chloride		ND	ug/kg	6.4		1	07/26/13 07/26/13 19:36
Bromomethane		ND	ug/kg	6.4		1	07/26/13 07/26/13 19:36
Chloroethane		ND	ug/kg	6.4		1	07/26/13 07/26/13 19:36
Acetone		40	ug/kg	26		1	07/26/13 07/26/13 19:36
Cyclohexane		ND	ug/kg	26		1	07/26/13 07/26/13 19:36
Trichlorofluoromethane		ND	ug/kg	6.4		1	07/26/13 07/26/13 19:36
1,1-Dichloroethene		ND	ug/kg	6.4		1	07/26/13 07/26/13 19:36
Methylene Chloride		ND	ug/kg	6.4		1	07/26/13 07/26/13 19:36
trans-1,2-Dichloroethene		ND	ug/kg	6.4		1	07/26/13 07/26/13 19:36
Methyl-t-butyl ether		ND	ug/kg	6.4		1	07/26/13 07/26/13 19:36
1,1-Dichloroethane		ND	ug/kg	6.4		1	07/26/13 07/26/13 19:36
2-Butanone (MEK)		ND	ug/kg	26		1	07/26/13 07/26/13 19:36
cis-1,2-Dichloroethene		ND	ug/kg	6.4		1	07/26/13 07/26/13 19:36
Bromochloromethane		ND	ug/kg	6.4		1	07/26/13 07/26/13 19:36
Chloroform		ND	ug/kg	6.4		1	07/26/13 07/26/13 19:36
1,1,1-Trichloroethane		ND	ug/kg	6.4		1	07/26/13 07/26/13 19:36
1,2-Dichloroethane		ND	ug/kg	6.4		1	07/26/13 07/26/13 19:36
Carbon Tetrachloride		ND	ug/kg	6.4		1	07/26/13 07/26/13 19:36
Benzene		ND	ug/kg	6.4		1	07/26/13 07/26/13 19:36
1,2-Dichloropropane		ND	ug/kg	6.4		1	07/26/13 07/26/13 19:36
Carbon Disulfide		ND	ug/kg	13		1	07/26/13 07/26/13 19:36
Methylcyclohexane		ND	ug/kg	26		1	07/26/13 07/26/13 19:36
Trichloroethene		ND	ug/kg	6.4		1	07/26/13 07/26/13 19:36
Methyl Acetate		ND	ug/kg	26		1	07/26/13 07/26/13 19:36
Bromodichloromethane		ND	ug/kg	6.4		1	07/26/13 07/26/13 19:36
cis-1,3-Dichloropropene		ND	ug/kg	6.4		1	07/26/13 07/26/13 19:36
4-Methyl-2-Pantanone		ND	ug/kg	26		1	07/26/13 07/26/13 19:36

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 13072314, 13072429, 13072601, 13072911, 13080206

**Whitman, Requardt & Associates, LLP., Fairfax, VA**

August 12, 2013

Project Name: Central Ave.

Project Location: Baltimore, MD

Project ID: 31576-007

Sample ID: CAESB-7 6-8	Date/Time Sampled: 07/24/2013 15:30				PSS Sample ID: 13072429-007			
Matrix: SOIL	Date/Time Received: 07/24/2013 16:26				% Solids: 78			
TCL Volatile Organic Compounds	Analytical Method: SW-846 8260 B				Preparation Method: 5030			
	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
trans-1,3-Dichloropropene	ND	ug/kg	6.4	1	1	07/26/13	07/26/13 19:36	1011
1,1,2-Trichloroethane	ND	ug/kg	6.4	1	1	07/26/13	07/26/13 19:36	1011
Toluene	ND	ug/kg	6.4	1	1	07/26/13	07/26/13 19:36	1011
2-Hexanone	ND	ug/kg	26	1	1	07/26/13	07/26/13 19:36	1011
1,2-Dibromoethane (EDB)	ND	ug/kg	6.4	1	1	07/26/13	07/26/13 19:36	1011
Dibromochloromethane	ND	ug/kg	6.4	1	1	07/26/13	07/26/13 19:36	1011
Bromoform	ND	ug/kg	6.4	1	1	07/26/13	07/26/13 19:36	1011
Tetrachloroethene	ND	ug/kg	6.4	1	1	07/26/13	07/26/13 19:36	1011
Chlorobenzene	ND	ug/kg	6.4	1	1	07/26/13	07/26/13 19:36	1011
Ethylbenzene	ND	ug/kg	6.4	1	1	07/26/13	07/26/13 19:36	1011
m,p-Xylenes	ND	ug/kg	13	1	1	07/26/13	07/26/13 19:36	1011
Styrene	ND	ug/kg	6.4	1	1	07/26/13	07/26/13 19:36	1011
1,1,2,2-Tetrachloroethane	ND	ug/kg	6.4	1	1	07/26/13	07/26/13 19:36	1011
o-Xylene	ND	ug/kg	6.4	1	1	07/26/13	07/26/13 19:36	1011
Isopropylbenzene	ND	ug/kg	6.4	1	1	07/26/13	07/26/13 19:36	1011
1,3-Dichlorobenzene	ND	ug/kg	6.4	1	1	07/26/13	07/26/13 19:36	1011
1,4-Dichlorobenzene	ND	ug/kg	6.4	1	1	07/26/13	07/26/13 19:36	1011
1,2-Dichlorobenzene	ND	ug/kg	6.4	1	1	07/26/13	07/26/13 19:36	1011
1,2-Dibromo-3-Chloropropane	ND	ug/kg	52	1	1	07/26/13	07/26/13 19:36	1011
1,2,4-Trichlorobenzene	ND	ug/kg	6.4	1	1	07/26/13	07/26/13 19:36	1011
Naphthalene	ND	ug/kg	6.4	1	1	07/26/13	07/26/13 19:36	1011
1,2,3-Trichlorobenzene	ND	ug/kg	6.4	1	1	07/26/13	07/26/13 19:36	1011

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Project Name: Central Ave.

Project Location: Baltimore, MD

Project ID: 31576-007

Sample ID: CAESB-7 6-8	Date/Time Sampled: 07/24/2013 15:30				PSS Sample ID: 13072429-007			
Matrix: SOIL	Date/Time Received: 07/24/2013 16:26				% Solids: 78			
TCL Semivolatile Organic Compounds	Analytical Method: SW-846 8270 C				Preparation Method: 3550			
	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Acenaphthene	ND	ug/kg	210	1	1	07/26/13	07/26/13 18:55	1014
Acenaphthylene	ND	ug/kg	210	1	1	07/26/13	07/26/13 18:55	1014
Acetophenone	ND	ug/kg	210	1	1	07/26/13	07/26/13 18:55	1014
Anthracene	ND	ug/kg	210	1	1	07/26/13	07/26/13 18:55	1014
Benzo(a)anthracene	ND	ug/kg	210	1	1	07/26/13	07/26/13 18:55	1014
Benzo(a)pyrene	ND	ug/kg	210	1	1	07/26/13	07/26/13 18:55	1014
Benzo(b)fluoranthene	ND	ug/kg	210	1	1	07/26/13	07/26/13 18:55	1014
Benzo(g,h,i)perylene	ND	ug/kg	210	1	1	07/26/13	07/26/13 18:55	1014
Benzo(k)fluoranthene	ND	ug/kg	210	1	1	07/26/13	07/26/13 18:55	1014
Biphenyl (Diphenyl)	ND	ug/kg	210	1	1	07/26/13	07/26/13 18:55	1014
Butyl benzyl phthalate	ND	ug/kg	210	1	1	07/26/13	07/26/13 18:55	1014
bis(2-chloroethoxy) methane	ND	ug/kg	210	1	1	07/26/13	07/26/13 18:55	1014
bis(2-chloroethyl) ether	ND	ug/kg	210	1	1	07/26/13	07/26/13 18:55	1014
bis(2-chloroisopropyl) ether	ND	ug/kg	210	1	1	07/26/13	07/26/13 18:55	1014
bis(2-ethylhexyl) phthalate	ND	ug/kg	210	1	1	07/26/13	07/26/13 18:55	1014
4-Bromophenylphenyl ether	ND	ug/kg	210	1	1	07/26/13	07/26/13 18:55	1014
Di-n-butyl phthalate	ND	ug/kg	430	1	1	07/26/13	07/26/13 18:55	1014
Carbazole	ND	ug/kg	210	1	1	07/26/13	07/26/13 18:55	1014
4-Chloro-3-methyl phenol	ND	ug/kg	210	1	1	07/26/13	07/26/13 18:55	1014
4-Chloroaniline	ND	ug/kg	430	1	1	07/26/13	07/26/13 18:55	1014
2-Chloronaphthalene	ND	ug/kg	210	1	1	07/26/13	07/26/13 18:55	1014
2-Chlorophenol	ND	ug/kg	210	1	1	07/26/13	07/26/13 18:55	1014
4-Chlorophenyl Phenyl ether	ND	ug/kg	210	1	1	07/26/13	07/26/13 18:55	1014
Chrysene	ND	ug/kg	210	1	1	07/26/13	07/26/13 18:55	1014
Dibenz(a,h)Anthracene	ND	ug/kg	210	1	1	07/26/13	07/26/13 18:55	1014
Dibenzofuran	ND	ug/kg	210	1	1	07/26/13	07/26/13 18:55	1014
3,3-Dichlorobenzidine	ND	ug/kg	210	1	1	07/26/13	07/26/13 18:55	1014
2,4-Dichlorophenol	ND	ug/kg	210	1	1	07/26/13	07/26/13 18:55	1014
Diethyl phthalate	ND	ug/kg	210	1	1	07/26/13	07/26/13 18:55	1014
Dimethyl phthalate	ND	ug/kg	210	1	1	07/26/13	07/26/13 18:55	1014

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**Whitman, Requardt & Associates, LLP., Fairfax, VA**

August 12, 2013

Project Name: Central Ave.

Project Location: Baltimore, MD

Project ID: 31576-007

Sample ID: CAESB-7 6-8	Date/Time Sampled: 07/24/2013 15:30				PSS Sample ID: 13072429-007			
Matrix: SOIL	Date/Time Received: 07/24/2013 16:26				% Solids: 78			
TCL Semivolatile Organic Compounds	Analytical Method: SW-846 8270 C				Preparation Method: 3550			
	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
2,4-Dimethylphenol	ND	ug/kg	210	1	1	07/26/13	07/26/13 18:55	1014
4,6-Dinitro-2-methyl phenol	ND	ug/kg	210	1	1	07/26/13	07/26/13 18:55	1014
2,4-Dinitrophenol	ND	ug/kg	430	1	1	07/26/13	07/26/13 18:55	1014
2,4-Dinitrotoluene	ND	ug/kg	210	1	1	07/26/13	07/26/13 18:55	1014
2,6-Dinitrotoluene	ND	ug/kg	210	1	1	07/26/13	07/26/13 18:55	1014
Fluoranthene	ND	ug/kg	210	1	1	07/26/13	07/26/13 18:55	1014
Fluorene	ND	ug/kg	210	1	1	07/26/13	07/26/13 18:55	1014
Hexachlorobenzene	ND	ug/kg	210	1	1	07/26/13	07/26/13 18:55	1014
Hexachlorobutadiene	ND	ug/kg	210	1	1	07/26/13	07/26/13 18:55	1014
Hexachlorocyclopentadiene	ND	ug/kg	210	1	1	07/26/13	07/26/13 18:55	1014
Hexachloroethane	ND	ug/kg	210	1	1	07/26/13	07/26/13 18:55	1014
Indeno(1,2,3-c,d)Pyrene	ND	ug/kg	210	1	1	07/26/13	07/26/13 18:55	1014
Isophorone	ND	ug/kg	210	1	1	07/26/13	07/26/13 18:55	1014
2-Methylnaphthalene	ND	ug/kg	210	1	1	07/26/13	07/26/13 18:55	1014
2-Methyl phenol	ND	ug/kg	210	1	1	07/26/13	07/26/13 18:55	1014
3&4-Methylphenol	ND	ug/kg	210	1	1	07/26/13	07/26/13 18:55	1014
Naphthalene	ND	ug/kg	210	1	1	07/26/13	07/26/13 18:55	1014
4-Nitroaniline	ND	ug/kg	210	1	1	07/26/13	07/26/13 18:55	1014
3-Nitroaniline	ND	ug/kg	210	1	1	07/26/13	07/26/13 18:55	1014
2-Nitroaniline	ND	ug/kg	430	1	1	07/26/13	07/26/13 18:55	1014
Nitrobenzene	ND	ug/kg	210	1	1	07/26/13	07/26/13 18:55	1014
2-Nitrophenol	ND	ug/kg	210	1	1	07/26/13	07/26/13 18:55	1014
4-Nitrophenol	ND	ug/kg	210	1	1	07/26/13	07/26/13 18:55	1014
N-Nitrosodi-n-propyl amine	ND	ug/kg	210	1	1	07/26/13	07/26/13 18:55	1014
N-Nitrosodiphenylamine	ND	ug/kg	210	1	1	07/26/13	07/26/13 18:55	1014
Di-n-octyl phthalate	ND	ug/kg	210	1	1	07/26/13	07/26/13 18:55	1014
Pentachlorophenol	ND	ug/kg	430	1	1	07/26/13	07/26/13 18:55	1014
Phenanthrene	ND	ug/kg	210	1	1	07/26/13	07/26/13 18:55	1014
Phenol	ND	ug/kg	210	1	1	07/26/13	07/26/13 18:55	1014
Atrazine	ND	ug/kg	210	1	1	07/26/13	07/26/13 18:55	1014

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 13072314, 13072429, 13072601, 13072911, 13080206

**Whitman, Requardt & Associates, LLP., Fairfax, VA**

August 12, 2013

Project Name: Central Ave.

Project Location: Baltimore, MD

Project ID: 31576-007

<b>Sample ID: CAESB-7 6-8</b>	<b>Date/Time Sampled: 07/24/2013 15:30</b>				<b>PSS Sample ID: 13072429-007</b>			
<b>Matrix: SOIL</b>	<b>Date/Time Received: 07/24/2013 16:26</b>				<b>% Solids: 78</b>			
TCL Semivolatile Organic Compounds	Analytical Method: SW-846 8270 C				Preparation Method: 3550			
	<b>Result</b>	<b>Units</b>	<b>RL</b>	<b>Flag</b>	<b>Dil</b>	<b>Prepared</b>	<b>Analyzed</b>	<b>Analyst</b>
Pyrene	ND	ug/kg	210	1	1	07/26/13	07/26/13 18:55	1014
Pyridine	ND	ug/kg	210	1	1	07/26/13	07/26/13 18:55	1014
Caprolactam	ND	ug/kg	210	1	1	07/26/13	07/26/13 18:55	1014
2,4,6-Trichlorophenol	ND	ug/kg	210	1	1	07/26/13	07/26/13 18:55	1014
2,4,5-Trichlorophenol	ND	ug/kg	210	1	1	07/26/13	07/26/13 18:55	1014

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 13072314, 13072429, 13072601, 13072911, 13080206

**Whitman, Requardt & Associates, LLP., Fairfax, VA**

August 12, 2013

Project Name: Central Ave.

Project Location: Baltimore, MD

Project ID: 31576-007

<b>Sample ID: CAESB-5A</b>		<b>Date/Time Sampled: 07/25/2013 10:30 PSS Sample ID: 13072601-001</b>					
<b>Matrix: GROUND WATER</b>		<b>Date/Time Received: 07/26/2013 08:10</b>					
Dissolved PP Metals		Analytical Method: SW-846 6020 A			Preparation Method: 3005A		
		<b>Result</b>	<b>Units</b>	<b>RL</b>	<b>Flag</b>	<b>Dil</b>	<b>Prepared</b> <b>Analyzed</b> <b>Analyst</b>
Antimony		ND	ug/L	5.0	1	1	07/29/13 07/29/13 17:33 1033
Arsenic		ND	ug/L	1.0	1	1	07/29/13 07/29/13 17:33 1033
Beryllium		ND	ug/L	1.0	1	1	07/29/13 07/30/13 15:08 1033
Cadmium		ND	ug/L	1.0	1	1	07/29/13 07/29/13 17:33 1033
Chromium		ND	ug/L	1.0	1	1	07/29/13 07/30/13 15:08 1033
Copper		ND	ug/L	1.0	1	1	07/29/13 07/31/13 22:21 1033
Lead		ND	ug/L	1.0	1	1	07/29/13 07/29/13 17:33 1033
Mercury		ND	ug/L	0.20	1	1	07/29/13 07/29/13 17:33 1033
Nickel		1.7	ug/L	1.0	1	1	07/29/13 07/31/13 22:21 1033
Selenium		1.5	ug/L	1.0	1	1	07/29/13 07/29/13 17:33 1033
Silver		ND	ug/L	1.0	1	1	07/29/13 07/29/13 17:33 1033
Thallium		ND	ug/L	1.0	1	1	07/29/13 07/29/13 17:33 1033
Zinc		ND	ug/L	20	1	1	07/29/13 07/29/13 17:33 1033
Total Petroleum Hydrocarbons - DRO		Analytical Method: SW-846 8015 C			Preparation Method: 3510C		
		<b>Result</b>	<b>Units</b>	<b>RL</b>	<b>Flag</b>	<b>Dil</b>	<b>Prepared</b> <b>Analyzed</b> <b>Analyst</b>
TPH-DRO (Diesel Range Organics)		0.11	mg/L	0.10	1	1	07/29/13 07/29/13 14:25 1040
Total Petroleum Hydrocarbons-GRO		Analytical Method: SW-846 8015C			Preparation Method: 5030B		
		<b>Result</b>	<b>Units</b>	<b>RL</b>	<b>Flag</b>	<b>Dil</b>	<b>Prepared</b> <b>Analyzed</b> <b>Analyst</b>
TPH-GRO (Gasoline Range Organics)		ND	ug/L	100	1	1	07/26/13 07/26/13 14:54 1035

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 13072314, 13072429, 13072601, 13072911, 13080206

**Whitman, Requardt & Associates, LLP., Fairfax, VA**

August 12, 2013

Project Name: Central Ave.

Project Location: Baltimore, MD

Project ID: 31576-007

<b>Sample ID: CAESB-5A</b>		<b>Date/Time Sampled: 07/25/2013 10:30 PSS Sample ID: 13072601-001</b>					
<b>Matrix: GROUND WATER</b>		<b>Date/Time Received: 07/26/2013 08:10</b>					
TCL Volatile Organic Compounds		Analytical Method: SW-846 8260 B			Preparation Method: 5030B		
		<b>Result</b>	<b>Units</b>	<b>RL</b>	<b>Flag</b>	<b>Dil</b>	<b>Prepared</b>
Dichlorodifluoromethane		ND	ug/L	1.0	1	1	07/30/13 07/31/13 04:23 1011
Chloromethane		ND	ug/L	1.0	1	1	07/30/13 07/31/13 04:23 1011
1,1,2-Trichloro-1,2,2-Trifluoroethane		ND	ug/L	1.0	1	1	07/30/13 07/31/13 04:23 1011
Vinyl Chloride		ND	ug/L	1.0	1	1	07/30/13 07/31/13 04:23 1011
Bromomethane		ND	ug/L	1.0	1	1	07/30/13 07/31/13 04:23 1011
Chloroethane		ND	ug/L	1.0	1	1	07/30/13 07/31/13 04:23 1011
Acetone		ND	ug/L	10	1	1	07/30/13 07/31/13 04:23 1011
Cyclohexane		ND	ug/L	10	1	1	07/30/13 07/31/13 04:23 1011
Trichlorofluoromethane		ND	ug/L	5.0	1	1	07/30/13 07/31/13 04:23 1011
1,1-Dichloroethene		ND	ug/L	1.0	1	1	07/30/13 07/31/13 04:23 1011
Methylene Chloride		ND	ug/L	1.0	1	1	07/30/13 07/31/13 04:23 1011
trans-1,2-Dichloroethene		ND	ug/L	1.0	1	1	07/30/13 07/31/13 04:23 1011
Methyl-t-butyl ether		ND	ug/L	1.0	1	1	07/30/13 07/31/13 04:23 1011
1,1-Dichloroethane		ND	ug/L	1.0	1	1	07/30/13 07/31/13 04:23 1011
2-Butanone (MEK)		ND	ug/L	10	1	1	07/30/13 07/31/13 04:23 1011
cis-1,2-Dichloroethene		3.6	ug/L	1.0	1	1	07/30/13 07/31/13 04:23 1011
Bromochloromethane		ND	ug/L	1.0	1	1	07/30/13 07/31/13 04:23 1011
Chloroform		3.9	ug/L	1.0	1	1	07/30/13 07/31/13 04:23 1011
1,1,1-Trichloroethane		ND	ug/L	1.0	1	1	07/30/13 07/31/13 04:23 1011
1,2-Dichloroethane		ND	ug/L	1.0	1	1	07/30/13 07/31/13 04:23 1011
Carbon Tetrachloride		ND	ug/L	1.0	1	1	07/30/13 07/31/13 04:23 1011
Benzene		ND	ug/L	1.0	1	1	07/30/13 07/31/13 04:23 1011
1,2-Dichloropropane		ND	ug/L	1.0	1	1	07/30/13 07/31/13 04:23 1011
Methyl Acetate		ND	ug/L	10	1	1	07/30/13 07/31/13 04:23 1011
Methylcyclohexane		ND	ug/L	10	1	1	07/30/13 07/31/13 04:23 1011
Trichloroethene		ND	ug/L	1.0	1	1	07/30/13 07/31/13 04:23 1011
Carbon Disulfide		ND	ug/L	10	1	1	07/30/13 07/31/13 04:23 1011
Bromodichloromethane		ND	ug/L	1.0	1	1	07/30/13 07/31/13 04:23 1011
cis-1,3-Dichloropropene		ND	ug/L	1.0	1	1	07/30/13 07/31/13 04:23 1011
4-Methyl-2-Pantanone		ND	ug/L	5.0	1	1	07/30/13 07/31/13 04:23 1011

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 13072314, 13072429, 13072601, 13072911, 13080206

**Whitman, Requardt & Associates, LLP., Fairfax, VA**

August 12, 2013

Project Name: Central Ave.

Project Location: Baltimore, MD

Project ID: 31576-007

Sample ID: CAESB-5A	Date/Time Sampled: 07/25/2013 10:30 PSS Sample ID: 13072601-001					
Matrix: GROUND WATER	Date/Time Received: 07/26/2013 08:10					
TCL Volatile Organic Compounds	Analytical Method: SW-846 8260 B			Preparation Method: 5030B		
	Result	Units	RL	Flag	Dil	Prepared Analyzed Analyst
trans-1,3-Dichloropropene	ND	ug/L	1.0	1	1	07/30/13 07/31/13 04:23 1011
1,1,2-Trichloroethane	ND	ug/L	1.0	1	1	07/30/13 07/31/13 04:23 1011
Toluene	ND	ug/L	1.0	1	1	07/30/13 07/31/13 04:23 1011
2-Hexanone	ND	ug/L	10	1	1	07/30/13 07/31/13 04:23 1011
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1	1	07/30/13 07/31/13 04:23 1011
Dibromochloromethane	ND	ug/L	1.0	1	1	07/30/13 07/31/13 04:23 1011
Bromoform	ND	ug/L	5.0	1	1	07/30/13 07/31/13 04:23 1011
Tetrachloroethene	2.7	ug/L	1.0	1	1	07/30/13 07/31/13 04:23 1011
Chlorobenzene	ND	ug/L	1.0	1	1	07/30/13 07/31/13 04:23 1011
Ethylbenzene	ND	ug/L	1.0	1	1	07/30/13 07/31/13 04:23 1011
m,p-Xylenes	ND	ug/L	2.0	1	1	07/30/13 07/31/13 04:23 1011
Styrene	ND	ug/L	1.0	1	1	07/30/13 07/31/13 04:23 1011
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1	1	07/30/13 07/31/13 04:23 1011
o-Xylene	ND	ug/L	1.0	1	1	07/30/13 07/31/13 04:23 1011
Isopropylbenzene	ND	ug/L	1.0	1	1	07/30/13 07/31/13 04:23 1011
1,3-Dichlorobenzene	ND	ug/L	1.0	1	1	07/30/13 07/31/13 04:23 1011
1,4-Dichlorobenzene	ND	ug/L	1.0	1	1	07/30/13 07/31/13 04:23 1011
1,2-Dichlorobenzene	ND	ug/L	1.0	1	1	07/30/13 07/31/13 04:23 1011
1,2-Dibromo-3-Chloropropane	ND	ug/L	10	1	1	07/30/13 07/31/13 04:23 1011
1,2,4-Trichlorobenzene	ND	ug/L	1.0	1	1	07/30/13 07/31/13 04:23 1011
Naphthalene	ND	ug/L	1.0	1	1	07/30/13 07/31/13 04:23 1011
1,2,3-Trichlorobenzene	ND	ug/L	1.0	1	1	07/30/13 07/31/13 04:23 1011

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 13072314, 13072429, 13072601, 13072911, 13080206

**Whitman, Requardt & Associates, LLP., Fairfax, VA**

August 12, 2013

Project Name: Central Ave.

Project Location: Baltimore, MD

Project ID: 31576-007

<b>Sample ID: CAESB-5A</b>		<b>Date/Time Sampled: 07/25/2013 10:30 PSS Sample ID: 13072601-001</b>					
<b>Matrix: GROUND WATER</b>		<b>Date/Time Received: 07/26/2013 08:10</b>					
TCL Semivolatile Organic Compounds		Analytical Method: SW-846 8270 C			Preparation Method: 3510C		
		<b>Result</b>	<b>Units</b>	<b>RL</b>	<b>Flag</b>	<b>Dil</b>	<b>Prepared</b>
Acenaphthene		ND	ug/L	5.0	1		07/30/13 07/30/13 19:58 1014
Acenaphthylene		ND	ug/L	5.0	1		07/30/13 07/30/13 19:58 1014
Acetophenone		ND	ug/L	5.0	1		07/30/13 07/30/13 19:58 1014
Anthracene		ND	ug/L	5.0	1		07/30/13 07/30/13 19:58 1014
Caprolactam		ND	ug/L	5.0	1		07/30/13 07/30/13 19:58 1014
Biphenyl (Diphenyl)		ND	ug/L	5.0	1		07/30/13 07/30/13 19:58 1014
Atrazine		ND	ug/L	5.0	1		07/30/13 07/30/13 19:58 1014
Benzo(a)anthracene		ND	ug/L	5.0	1		07/30/13 07/30/13 19:58 1014
Benzo(a)pyrene		ND	ug/L	5.0	1		07/30/13 07/30/13 19:58 1014
Benzo(b)fluoranthene		ND	ug/L	5.0	1		07/30/13 07/30/13 19:58 1014
Benzo(g,h,i)perylene		ND	ug/L	5.0	1		07/30/13 07/30/13 19:58 1014
Benzo(k)fluoranthene		ND	ug/L	5.0	1		07/30/13 07/30/13 19:58 1014
Butyl benzyl phthalate		ND	ug/L	5.0	1		07/30/13 07/30/13 19:58 1014
bis(2-chloroethoxy) methane		ND	ug/L	5.0	1		07/30/13 07/30/13 19:58 1014
bis(2-chloroethyl) ether		ND	ug/L	5.0	1		07/30/13 07/30/13 19:58 1014
bis(2-chloroisopropyl) ether		ND	ug/L	5.0	1		07/30/13 07/30/13 19:58 1014
bis(2-ethylhexyl) phthalate		ND	ug/L	5.0	1		07/30/13 07/30/13 19:58 1014
4-Bromophenylphenyl ether		ND	ug/L	5.0	1		07/30/13 07/30/13 19:58 1014
Di-n-butyl phthalate		ND	ug/L	5.0	1		07/30/13 07/30/13 19:58 1014
Carbazole		ND	ug/L	5.0	1		07/30/13 07/30/13 19:58 1014
4-Chloro-3-methyl phenol		ND	ug/L	5.0	1		07/30/13 07/30/13 19:58 1014
4-Chloroaniline		ND	ug/L	10	1		07/30/13 07/30/13 19:58 1014
2-Chloronaphthalene		ND	ug/L	5.0	1		07/30/13 07/30/13 19:58 1014
2-Chlorophenol		ND	ug/L	5.0	1		07/30/13 07/30/13 19:58 1014
4-Chlorophenyl Phenyl ether		ND	ug/L	5.0	1		07/30/13 07/30/13 19:58 1014
Chrysene		ND	ug/L	5.0	1		07/30/13 07/30/13 19:58 1014
Dibenz(a,h)Anthracene		ND	ug/L	5.0	1		07/30/13 07/30/13 19:58 1014
Dibenzofuran		ND	ug/L	5.0	1		07/30/13 07/30/13 19:58 1014
3,3-Dichlorobenzidine		ND	ug/L	5.0	1		07/30/13 07/30/13 19:58 1014
2,4-Dichlorophenol		ND	ug/L	5.0	1		07/30/13 07/30/13 19:58 1014

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 13072314, 13072429, 13072601, 13072911, 13080206

**Whitman, Requardt & Associates, LLP., Fairfax, VA**

August 12, 2013

Project Name: Central Ave.

Project Location: Baltimore, MD

Project ID: 31576-007

<b>Sample ID: CAESB-5A</b>		<b>Date/Time Sampled: 07/25/2013 10:30 PSS Sample ID: 13072601-001</b>					
<b>Matrix: GROUND WATER</b>		<b>Date/Time Received: 07/26/2013 08:10</b>					
TCL Semivolatile Organic Compounds		Analytical Method: SW-846 8270 C			Preparation Method: 3510C		
		<b>Result</b>	<b>Units</b>	<b>RL</b>	<b>Flag</b>	<b>Dil</b>	<b>Prepared</b>
Diethyl phthalate		ND	ug/L	5.0	1	1	07/30/13 07/30/13 19:58 1014
Dimethyl phthalate		ND	ug/L	5.0	1	1	07/30/13 07/30/13 19:58 1014
2,4-Dimethylphenol		ND	ug/L	5.0	1	1	07/30/13 07/30/13 19:58 1014
4,6-Dinitro-2-methyl phenol		ND	ug/L	5.0	1	1	07/30/13 07/30/13 19:58 1014
2,4-Dinitrophenol		ND	ug/L	10	1	1	07/30/13 07/30/13 19:58 1014
2,4-Dinitrotoluene		ND	ug/L	5.0	1	1	07/30/13 07/30/13 19:58 1014
2,6-Dinitrotoluene		ND	ug/L	5.0	1	1	07/30/13 07/30/13 19:58 1014
Fluoranthene		ND	ug/L	5.0	1	1	07/30/13 07/30/13 19:58 1014
Fluorene		ND	ug/L	5.0	1	1	07/30/13 07/30/13 19:58 1014
Hexachlorobenzene		ND	ug/L	5.0	1	1	07/30/13 07/30/13 19:58 1014
Hexachlorobutadiene		ND	ug/L	5.0	1	1	07/30/13 07/30/13 19:58 1014
Hexachlorocyclopentadiene		ND	ug/L	5.0	1	1	07/30/13 07/30/13 19:58 1014
Hexachloroethane		ND	ug/L	5.0	1	1	07/30/13 07/30/13 19:58 1014
Indeno(1,2,3-c,d)Pyrene		ND	ug/L	5.0	1	1	07/30/13 07/30/13 19:58 1014
Isophorone		ND	ug/L	5.0	1	1	07/30/13 07/30/13 19:58 1014
2-Methylnaphthalene		ND	ug/L	5.0	1	1	07/30/13 07/30/13 19:58 1014
2-Methyl phenol		ND	ug/L	5.0	1	1	07/30/13 07/30/13 19:58 1014
3&4-Methylphenol		ND	ug/L	5.0	1	1	07/30/13 07/30/13 19:58 1014
Naphthalene		ND	ug/L	5.0	1	1	07/30/13 07/30/13 19:58 1014
4-Nitroaniline		ND	ug/L	10	1	1	07/30/13 07/30/13 19:58 1014
3-Nitroaniline		ND	ug/L	5.0	1	1	07/30/13 07/30/13 19:58 1014
2-Nitroaniline		ND	ug/L	5.0	1	1	07/30/13 07/30/13 19:58 1014
Nitrobenzene		ND	ug/L	5.0	1	1	07/30/13 07/30/13 19:58 1014
2-Nitrophenol		ND	ug/L	5.0	1	1	07/30/13 07/30/13 19:58 1014
4-Nitrophenol		ND	ug/L	5.0	1	1	07/30/13 07/30/13 19:58 1014
N-Nitrosodi-n-propyl amine		ND	ug/L	5.0	1	1	07/30/13 07/30/13 19:58 1014
N-Nitrosodiphenylamine		ND	ug/L	5.0	1	1	07/30/13 07/30/13 19:58 1014
Di-n-octyl phthalate		ND	ug/L	10	1	1	07/30/13 07/30/13 19:58 1014
Pentachlorophenol		ND	ug/L	10	1	1	07/30/13 07/30/13 19:58 1014
Phenanthrene		ND	ug/L	5.0	1	1	07/30/13 07/30/13 19:58 1014

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 13072314, 13072429, 13072601, 13072911, 13080206

**Whitman, Requardt & Associates, LLP., Fairfax, VA**

August 12, 2013

Project Name: Central Ave.

Project Location: Baltimore, MD

Project ID: 31576-007

<b>Sample ID: CAESB-5A</b>	Date/Time Sampled: 07/25/2013 10:30 PSS Sample ID: 13072601-001							
<b>Matrix: GROUND WATER</b>	Date/Time Received: 07/26/2013 08:10							
TCL Semivolatile Organic Compounds	Analytical Method: SW-846 8270 C				Preparation Method: 3510C			
	<b>Result</b>	<b>Units</b>	<b>RL</b>	<b>Flag</b>	<b>Dil</b>	<b>Prepared</b>	<b>Analyzed</b>	<b>Analyst</b>
Phenol	ND	ug/L	5.0	1		07/30/13	07/30/13 19:58	1014
Pyrene	ND	ug/L	5.0	1		07/30/13	07/30/13 19:58	1014
Pyridine	ND	ug/L	5.0	1		07/30/13	07/30/13 19:58	1014
2,4,6-Trichlorophenol	ND	ug/L	5.0	1		07/30/13	07/30/13 19:58	1014
2,4,5-Trichlorophenol	ND	ug/L	5.0	1		07/30/13	07/30/13 19:58	1014

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 13072314, 13072429, 13072601, 13072911, 13080206

**Whitman, Requardt & Associates, LLP., Fairfax, VA**

August 12, 2013

Project Name: Central Ave.

Project Location: Baltimore, MD

Project ID: 31576-007

<b>Sample ID: CAESB-7</b>	<b>Date/Time Sampled: 07/25/2013 09:00 PSS Sample ID: 13072601-002</b>							
<b>Matrix: GROUND WATER</b>	<b>Date/Time Received: 07/26/2013 08:10</b>							
Dissolved PP Metals	Analytical Method: SW-846 6020 A				Preparation Method: 3005A			
	<b>Result</b>	<b>Units</b>	<b>RL</b>	<b>Flag</b>	<b>Dil</b>	<b>Prepared</b>	<b>Analyzed</b>	<b>Analyst</b>
Antimony	ND	ug/L	5.0	1		07/29/13	07/29/13 17:39	1033
Arsenic	ND	ug/L	1.0	1		07/29/13	07/31/13 22:27	1033
Beryllium	ND	ug/L	1.0	1		07/29/13	07/30/13 15:14	1033
Cadmium	ND	ug/L	1.0	1		07/29/13	07/29/13 17:39	1033
Chromium	ND	ug/L	1.0	1		07/29/13	07/30/13 15:14	1033
Copper	ND	ug/L	1.0	1		07/29/13	07/31/13 22:27	1033
Lead	ND	ug/L	1.0	1		07/29/13	07/29/13 17:39	1033
Mercury	ND	ug/L	0.20	1		07/29/13	07/29/13 17:39	1033
Nickel	ND	ug/L	1.0	1		07/29/13	07/31/13 22:27	1033
Selenium	ND	ug/L	1.0	1		07/29/13	07/29/13 17:39	1033
Silver	ND	ug/L	1.0	1		07/29/13	07/29/13 17:39	1033
Thallium	ND	ug/L	1.0	1		07/29/13	07/29/13 17:39	1033
Zinc	ND	ug/L	20	1		07/29/13	07/31/13 22:27	1033
Total Petroleum Hydrocarbons - DRO	Analytical Method: SW-846 8015 C				Preparation Method: 3510C			
	<b>Result</b>	<b>Units</b>	<b>RL</b>	<b>Flag</b>	<b>Dil</b>	<b>Prepared</b>	<b>Analyzed</b>	<b>Analyst</b>
TPH-DRO (Diesel Range Organics)	<b>0.12</b>	mg/L	0.10	1		07/29/13	07/29/13 14:48	1040
Total Petroleum Hydrocarbons-GRO	Analytical Method: SW-846 8015C				Preparation Method: 5030B			
	<b>Result</b>	<b>Units</b>	<b>RL</b>	<b>Flag</b>	<b>Dil</b>	<b>Prepared</b>	<b>Analyzed</b>	<b>Analyst</b>
TPH-GRO (Gasoline Range Organics)	ND	ug/L	100	1		07/26/13	07/26/13 15:19	1035

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 13072314, 13072429, 13072601, 13072911, 13080206

**Whitman, Requardt & Associates, LLP., Fairfax, VA**

August 12, 2013

Project Name: Central Ave.

Project Location: Baltimore, MD

Project ID: 31576-007

Sample ID: CAESB-7	Date/Time Sampled: 07/25/2013 09:00 PSS Sample ID: 13072601-002					
Matrix: GROUND WATER	Date/Time Received: 07/26/2013 08:10					
TCL Volatile Organic Compounds	Analytical Method: SW-846 8260 B			Preparation Method: 5030B		
	Result	Units	RL	Flag	Dil	Prepared Analyzed Analyst
Dichlorodifluoromethane	ND	ug/L	1.0	1	1	07/30/13 07/31/13 04:52 1011
Chloromethane	ND	ug/L	1.0	1	1	07/30/13 07/31/13 04:52 1011
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	ug/L	1.0	1	1	07/30/13 07/31/13 04:52 1011
Vinyl Chloride	ND	ug/L	1.0	1	1	07/30/13 07/31/13 04:52 1011
Bromomethane	ND	ug/L	1.0	1	1	07/30/13 07/31/13 04:52 1011
Chloroethane	ND	ug/L	1.0	1	1	07/30/13 07/31/13 04:52 1011
Acetone	ND	ug/L	10	1	1	07/30/13 07/31/13 04:52 1011
Cyclohexane	ND	ug/L	10	1	1	07/30/13 07/31/13 04:52 1011
Trichlorofluoromethane	ND	ug/L	5.0	1	1	07/30/13 07/31/13 04:52 1011
1,1-Dichloroethene	ND	ug/L	1.0	1	1	07/30/13 07/31/13 04:52 1011
Methylene Chloride	ND	ug/L	1.0	1	1	07/30/13 07/31/13 04:52 1011
trans-1,2-Dichloroethene	ND	ug/L	1.0	1	1	07/30/13 07/31/13 04:52 1011
Methyl-t-butyl ether	ND	ug/L	1.0	1	1	07/30/13 07/31/13 04:52 1011
1,1-Dichloroethane	ND	ug/L	1.0	1	1	07/30/13 07/31/13 04:52 1011
2-Butanone (MEK)	ND	ug/L	10	1	1	07/30/13 07/31/13 04:52 1011
cis-1,2-Dichloroethene	2.4	ug/L	1.0	1	1	07/30/13 07/31/13 04:52 1011
Bromochloromethane	ND	ug/L	1.0	1	1	07/30/13 07/31/13 04:52 1011
Chloroform	ND	ug/L	1.0	1	1	07/30/13 07/31/13 04:52 1011
1,1,1-Trichloroethane	ND	ug/L	1.0	1	1	07/30/13 07/31/13 04:52 1011
1,2-Dichloroethane	ND	ug/L	1.0	1	1	07/30/13 07/31/13 04:52 1011
Carbon Tetrachloride	ND	ug/L	1.0	1	1	07/30/13 07/31/13 04:52 1011
Benzene	ND	ug/L	1.0	1	1	07/30/13 07/31/13 04:52 1011
1,2-Dichloropropane	ND	ug/L	1.0	1	1	07/30/13 07/31/13 04:52 1011
Methyl Acetate	ND	ug/L	10	1	1	07/30/13 07/31/13 04:52 1011
Methylcyclohexane	ND	ug/L	10	1	1	07/30/13 07/31/13 04:52 1011
Trichloroethene	1.5	ug/L	1.0	1	1	07/30/13 07/31/13 04:52 1011
Carbon Disulfide	ND	ug/L	10	1	1	07/30/13 07/31/13 04:52 1011
Bromodichloromethane	ND	ug/L	1.0	1	1	07/30/13 07/31/13 04:52 1011
cis-1,3-Dichloropropene	ND	ug/L	1.0	1	1	07/30/13 07/31/13 04:52 1011
4-Methyl-2-Pantanone	ND	ug/L	5.0	1	1	07/30/13 07/31/13 04:52 1011

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 13072314, 13072429, 13072601, 13072911, 13080206

**Whitman, Requardt & Associates, LLP., Fairfax, VA**

August 12, 2013

Project Name: Central Ave.

Project Location: Baltimore, MD

Project ID: 31576-007

Sample ID: CAESB-7	Date/Time Sampled: 07/25/2013 09:00 PSS Sample ID: 13072601-002					
Matrix: GROUND WATER	Date/Time Received: 07/26/2013 08:10					
TCL Volatile Organic Compounds	Analytical Method: SW-846 8260 B			Preparation Method: 5030B		
	Result	Units	RL	Flag	Dil	Prepared Analyzed Analyst
trans-1,3-Dichloropropene	ND	ug/L	1.0	1	1	07/30/13 07/31/13 04:52 1011
1,1,2-Trichloroethane	ND	ug/L	1.0	1	1	07/30/13 07/31/13 04:52 1011
Toluene	ND	ug/L	1.0	1	1	07/30/13 07/31/13 04:52 1011
2-Hexanone	ND	ug/L	10	1	1	07/30/13 07/31/13 04:52 1011
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1	1	07/30/13 07/31/13 04:52 1011
Dibromochloromethane	ND	ug/L	1.0	1	1	07/30/13 07/31/13 04:52 1011
Bromoform	ND	ug/L	5.0	1	1	07/30/13 07/31/13 04:52 1011
Tetrachloroethene	7.8	ug/L	1.0	1	1	07/30/13 07/31/13 04:52 1011
Chlorobenzene	ND	ug/L	1.0	1	1	07/30/13 07/31/13 04:52 1011
Ethylbenzene	ND	ug/L	1.0	1	1	07/30/13 07/31/13 04:52 1011
m,p-Xylenes	ND	ug/L	2.0	1	1	07/30/13 07/31/13 04:52 1011
Styrene	ND	ug/L	1.0	1	1	07/30/13 07/31/13 04:52 1011
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1	1	07/30/13 07/31/13 04:52 1011
o-Xylene	ND	ug/L	1.0	1	1	07/30/13 07/31/13 04:52 1011
Isopropylbenzene	ND	ug/L	1.0	1	1	07/30/13 07/31/13 04:52 1011
1,3-Dichlorobenzene	ND	ug/L	1.0	1	1	07/30/13 07/31/13 04:52 1011
1,4-Dichlorobenzene	ND	ug/L	1.0	1	1	07/30/13 07/31/13 04:52 1011
1,2-Dichlorobenzene	ND	ug/L	1.0	1	1	07/30/13 07/31/13 04:52 1011
1,2-Dibromo-3-Chloropropane	ND	ug/L	10	1	1	07/30/13 07/31/13 04:52 1011
1,2,4-Trichlorobenzene	ND	ug/L	1.0	1	1	07/30/13 07/31/13 04:52 1011
Naphthalene	ND	ug/L	1.0	1	1	07/30/13 07/31/13 04:52 1011
1,2,3-Trichlorobenzene	ND	ug/L	1.0	1	1	07/30/13 07/31/13 04:52 1011

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 13072314, 13072429, 13072601, 13072911, 13080206

**Whitman, Requardt & Associates, LLP., Fairfax, VA**

August 12, 2013

Project Name: Central Ave.

Project Location: Baltimore, MD

Project ID: 31576-007

<b>Sample ID: CAESB-7</b>		<b>Date/Time Sampled: 07/25/2013 09:00</b>				<b>PSS Sample ID: 13072601-002</b>		
<b>Matrix: GROUND WATER</b>		<b>Date/Time Received: 07/26/2013 08:10</b>						
TCL Semivolatile Organic Compounds		Analytical Method: SW-846 8270 C				Preparation Method: 3510C		
		<b>Result</b>	<b>Units</b>	<b>RL</b>	<b>Flag</b>	<b>Dil</b>	<b>Prepared</b>	<b>Analyzed</b>
Acenaphthene		ND	ug/L	5.0	1	1	07/30/13	07/30/13 20:27
Acenaphthylene		ND	ug/L	5.0	1	1	07/30/13	07/30/13 20:27
Acetophenone		ND	ug/L	5.0	1	1	07/30/13	07/30/13 20:27
Anthracene		ND	ug/L	5.0	1	1	07/30/13	07/30/13 20:27
Caprolactam		ND	ug/L	5.0	1	1	07/30/13	07/30/13 20:27
Biphenyl (Diphenyl)		ND	ug/L	5.0	1	1	07/30/13	07/30/13 20:27
Atrazine		ND	ug/L	5.0	1	1	07/30/13	07/30/13 20:27
Benzo(a)anthracene		ND	ug/L	5.0	1	1	07/30/13	07/30/13 20:27
Benzo(a)pyrene		ND	ug/L	5.0	1	1	07/30/13	07/30/13 20:27
Benzo(b)fluoranthene		ND	ug/L	5.0	1	1	07/30/13	07/30/13 20:27
Benzo(g,h,i)perylene		ND	ug/L	5.0	1	1	07/30/13	07/30/13 20:27
Benzo(k)fluoranthene		ND	ug/L	5.0	1	1	07/30/13	07/30/13 20:27
Butyl benzyl phthalate		ND	ug/L	5.0	1	1	07/30/13	07/30/13 20:27
bis(2-chloroethoxy) methane		ND	ug/L	5.0	1	1	07/30/13	07/30/13 20:27
bis(2-chloroethyl) ether		ND	ug/L	5.0	1	1	07/30/13	07/30/13 20:27
bis(2-chloroisopropyl) ether		ND	ug/L	5.0	1	1	07/30/13	07/30/13 20:27
bis(2-ethylhexyl) phthalate		ND	ug/L	5.0	1	1	07/30/13	07/30/13 20:27
4-Bromophenylphenyl ether		ND	ug/L	5.0	1	1	07/30/13	07/30/13 20:27
Di-n-butyl phthalate		ND	ug/L	5.0	1	1	07/30/13	07/30/13 20:27
Carbazole		ND	ug/L	5.0	1	1	07/30/13	07/30/13 20:27
4-Chloro-3-methyl phenol		ND	ug/L	5.0	1	1	07/30/13	07/30/13 20:27
4-Chloroaniline		ND	ug/L	10	1	1	07/30/13	07/30/13 20:27
2-Chloronaphthalene		ND	ug/L	5.0	1	1	07/30/13	07/30/13 20:27
2-Chlorophenol		ND	ug/L	5.0	1	1	07/30/13	07/30/13 20:27
4-Chlorophenyl Phenyl ether		ND	ug/L	5.0	1	1	07/30/13	07/30/13 20:27
Chrysene		ND	ug/L	5.0	1	1	07/30/13	07/30/13 20:27
Dibenz(a,h)Anthracene		ND	ug/L	5.0	1	1	07/30/13	07/30/13 20:27
Dibenzofuran		ND	ug/L	5.0	1	1	07/30/13	07/30/13 20:27
3,3-Dichlorobenzidine		ND	ug/L	5.0	1	1	07/30/13	07/30/13 20:27
2,4-Dichlorophenol		ND	ug/L	5.0	1	1	07/30/13	07/30/13 20:27

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 13072314, 13072429, 13072601, 13072911, 13080206

**Whitman, Requardt & Associates, LLP., Fairfax, VA**

August 12, 2013

Project Name: Central Ave.

Project Location: Baltimore, MD

Project ID: 31576-007

<b>Sample ID: CAESB-7</b>		<b>Date/Time Sampled: 07/25/2013 09:00 PSS Sample ID: 13072601-002</b>					
<b>Matrix: GROUND WATER</b>		<b>Date/Time Received: 07/26/2013 08:10</b>					
TCL Semivolatile Organic Compounds		Analytical Method: SW-846 8270 C			Preparation Method: 3510C		
		<b>Result</b>	<b>Units</b>	<b>RL</b>	<b>Flag</b>	<b>Dil</b>	<b>Prepared</b>
Diethyl phthalate		ND	ug/L	5.0	1	1	07/30/13 07/30/13 20:27 1014
Dimethyl phthalate		ND	ug/L	5.0	1	1	07/30/13 07/30/13 20:27 1014
2,4-Dimethylphenol		ND	ug/L	5.0	1	1	07/30/13 07/30/13 20:27 1014
4,6-Dinitro-2-methyl phenol		ND	ug/L	5.0	1	1	07/30/13 07/30/13 20:27 1014
2,4-Dinitrophenol		ND	ug/L	10	1	1	07/30/13 07/30/13 20:27 1014
2,4-Dinitrotoluene		ND	ug/L	5.0	1	1	07/30/13 07/30/13 20:27 1014
2,6-Dinitrotoluene		ND	ug/L	5.0	1	1	07/30/13 07/30/13 20:27 1014
Fluoranthene		ND	ug/L	5.0	1	1	07/30/13 07/30/13 20:27 1014
Fluorene		ND	ug/L	5.0	1	1	07/30/13 07/30/13 20:27 1014
Hexachlorobenzene		ND	ug/L	5.0	1	1	07/30/13 07/30/13 20:27 1014
Hexachlorobutadiene		ND	ug/L	5.0	1	1	07/30/13 07/30/13 20:27 1014
Hexachlorocyclopentadiene		ND	ug/L	5.0	1	1	07/30/13 07/30/13 20:27 1014
Hexachloroethane		ND	ug/L	5.0	1	1	07/30/13 07/30/13 20:27 1014
Indeno(1,2,3-c,d)Pyrene		ND	ug/L	5.0	1	1	07/30/13 07/30/13 20:27 1014
Isophorone		ND	ug/L	5.0	1	1	07/30/13 07/30/13 20:27 1014
2-Methylnaphthalene		ND	ug/L	5.0	1	1	07/30/13 07/30/13 20:27 1014
2-Methyl phenol		ND	ug/L	5.0	1	1	07/30/13 07/30/13 20:27 1014
3&4-Methylphenol		ND	ug/L	5.0	1	1	07/30/13 07/30/13 20:27 1014
Naphthalene		ND	ug/L	5.0	1	1	07/30/13 07/30/13 20:27 1014
4-Nitroaniline		ND	ug/L	10	1	1	07/30/13 07/30/13 20:27 1014
3-Nitroaniline		ND	ug/L	5.0	1	1	07/30/13 07/30/13 20:27 1014
2-Nitroaniline		ND	ug/L	5.0	1	1	07/30/13 07/30/13 20:27 1014
Nitrobenzene		ND	ug/L	5.0	1	1	07/30/13 07/30/13 20:27 1014
2-Nitrophenol		ND	ug/L	5.0	1	1	07/30/13 07/30/13 20:27 1014
4-Nitrophenol		ND	ug/L	5.0	1	1	07/30/13 07/30/13 20:27 1014
N-Nitrosodi-n-propyl amine		ND	ug/L	5.0	1	1	07/30/13 07/30/13 20:27 1014
N-Nitrosodiphenylamine		ND	ug/L	5.0	1	1	07/30/13 07/30/13 20:27 1014
Di-n-octyl phthalate		ND	ug/L	10	1	1	07/30/13 07/30/13 20:27 1014
Pentachlorophenol		ND	ug/L	10	1	1	07/30/13 07/30/13 20:27 1014
Phenanthrene		ND	ug/L	5.0	1	1	07/30/13 07/30/13 20:27 1014

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 13072314, 13072429, 13072601, 13072911, 13080206

**Whitman, Requardt & Associates, LLP., Fairfax, VA**

August 12, 2013

Project Name: Central Ave.

Project Location: Baltimore, MD

Project ID: 31576-007

<b>Sample ID: CAESB-7</b>	<b>Date/Time Sampled: 07/25/2013 09:00 PSS Sample ID: 13072601-002</b>							
<b>Matrix: GROUND WATER</b>	<b>Date/Time Received: 07/26/2013 08:10</b>							
TCL Semivolatile Organic Compounds	Analytical Method: SW-846 8270 C				Preparation Method: 3510C			
	<b>Result</b>	<b>Units</b>	<b>RL</b>	<b>Flag</b>	<b>Dil</b>	<b>Prepared</b>	<b>Analyzed</b>	<b>Analyst</b>
Phenol	ND	ug/L	5.0	1		07/30/13	07/30/13 20:27	1014
Pyrene	ND	ug/L	5.0	1		07/30/13	07/30/13 20:27	1014
Pyridine	ND	ug/L	5.0	1		07/30/13	07/30/13 20:27	1014
2,4,6-Trichlorophenol	ND	ug/L	5.0	1		07/30/13	07/30/13 20:27	1014
2,4,5-Trichlorophenol	ND	ug/L	5.0	1		07/30/13	07/30/13 20:27	1014

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 13072314, 13072429, 13072601, 13072911, 13080206

**Whitman, Requardt & Associates, LLP., Fairfax, VA**

August 12, 2013

Project Name: Central Ave.

Project Location: Baltimore, MD

Project ID: 31576-007

<b>Sample ID: CAESB-11 4-6'</b>	<b>Date/Time Sampled: 07/25/2013 14:20</b>			<b>PSS Sample ID: 13072601-003</b>		
<b>Matrix: SOIL</b>	<b>Date/Time Received: 07/26/2013 08:10</b>			<b>% Solids: 60</b>		
Total Petroleum Hydrocarbons - DRO	Analytical Method: SW-846 8015 C			Preparation Method: 3550		
	<b>Result</b>	<b>Units</b>	<b>RL</b>	<b>Flag</b>	<b>Dil</b>	<b>Prepared</b>
TPH-DRO (Diesel Range Organics)	ND	mg/kg	6.6		1	07/30/13 07/30/13 14:26 1040
Total Petroleum Hydrocarbons-GRO	Analytical Method: SW-846 8015C			Preparation Method: 5030		
	<b>Result</b>	<b>Units</b>	<b>RL</b>	<b>Flag</b>	<b>Dil</b>	<b>Prepared</b>
TPH-GRO (Gasoline Range Organics)	ND	ug/kg	170		1	07/26/13 07/26/13 19:19 1035

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 13072314, 13072429, 13072601, 13072911, 13080206

**Whitman, Requardt & Associates, LLP., Fairfax, VA**

August 12, 2013

Project Name: Central Ave.

Project Location: Baltimore, MD

Project ID: 31576-007

<b>Sample ID: CAESB-11 4-6'</b>		<b>Date/Time Sampled: 07/25/2013 14:20</b>				<b>PSS Sample ID: 13072601-003</b>		
<b>Matrix: SOIL</b>		<b>Date/Time Received: 07/26/2013 08:10</b>				<b>% Solids: 60</b>		
TCL Volatile Organic Compounds		Analytical Method: SW-846 8260 B				Preparation Method: 5030		
		<b>Result</b>	<b>Units</b>	<b>RL</b>	<b>Flag</b>	<b>Dil</b>	<b>Prepared</b>	<b>Analyzed</b>
Dichlorodifluoromethane		ND	ug/kg	8.4	1	1	07/29/13	07/29/13 16:29
Chloromethane		ND	ug/kg	8.4	1	1	07/29/13	07/29/13 16:29
1,1,2-Trichloro-1,2,2-Trifluoroethane		ND	ug/kg	8.4	1	1	07/29/13	07/29/13 16:29
Vinyl Chloride		ND	ug/kg	8.4	1	1	07/29/13	07/29/13 16:29
Bromomethane		ND	ug/kg	8.4	1	1	07/29/13	07/29/13 16:29
Chloroethane		ND	ug/kg	8.4	1	1	07/29/13	07/29/13 16:29
Acetone		150	ug/kg	33	1	1	07/29/13	07/29/13 16:29
Cyclohexane		ND	ug/kg	33	1	1	07/29/13	07/29/13 16:29
Trichlorofluoromethane		ND	ug/kg	8.4	1	1	07/29/13	07/29/13 16:29
1,1-Dichloroethene		ND	ug/kg	8.4	1	1	07/29/13	07/29/13 16:29
Methylene Chloride		ND	ug/kg	8.4	1	1	07/29/13	07/29/13 16:29
trans-1,2-Dichloroethene		ND	ug/kg	8.4	1	1	07/29/13	07/29/13 16:29
Methyl-t-butyl ether		ND	ug/kg	8.4	1	1	07/29/13	07/29/13 16:29
1,1-Dichloroethane		ND	ug/kg	8.4	1	1	07/29/13	07/29/13 16:29
2-Butanone (MEK)		ND	ug/kg	33	1	1	07/29/13	07/29/13 16:29
cis-1,2-Dichloroethene		ND	ug/kg	8.4	1	1	07/29/13	07/29/13 16:29
Bromochloromethane		ND	ug/kg	8.4	1	1	07/29/13	07/29/13 16:29
Chloroform		ND	ug/kg	8.4	1	1	07/29/13	07/29/13 16:29
1,1,1-Trichloroethane		ND	ug/kg	8.4	1	1	07/29/13	07/29/13 16:29
1,2-Dichloroethane		ND	ug/kg	8.4	1	1	07/29/13	07/29/13 16:29
Carbon Tetrachloride		ND	ug/kg	8.4	1	1	07/29/13	07/29/13 16:29
Benzene		ND	ug/kg	8.4	1	1	07/29/13	07/29/13 16:29
1,2-Dichloropropane		ND	ug/kg	8.4	1	1	07/29/13	07/29/13 16:29
Carbon Disulfide		ND	ug/kg	17	1	1	07/29/13	07/29/13 16:29
Methylcyclohexane		ND	ug/kg	33	1	1	07/29/13	07/29/13 16:29
Trichloroethene		ND	ug/kg	8.4	1	1	07/29/13	07/29/13 16:29
Methyl Acetate		ND	ug/kg	33	1	1	07/29/13	07/29/13 16:29
Bromodichloromethane		ND	ug/kg	8.4	1	1	07/29/13	07/29/13 16:29
cis-1,3-Dichloropropene		ND	ug/kg	8.4	1	1	07/29/13	07/29/13 16:29
4-Methyl-2-Pantanone		ND	ug/kg	33	1	1	07/29/13	07/29/13 16:29

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 13072314, 13072429, 13072601, 13072911, 13080206

**Whitman, Requardt & Associates, LLP., Fairfax, VA**

August 12, 2013

Project Name: Central Ave.

Project Location: Baltimore, MD

Project ID: 31576-007

<b>Sample ID: CAESB-11 4-6'</b>		<b>Date/Time Sampled: 07/25/2013 14:20</b>				<b>PSS Sample ID: 13072601-003</b>		
<b>Matrix: SOIL</b>		<b>Date/Time Received: 07/26/2013 08:10</b>				<b>% Solids: 60</b>		
TCL Volatile Organic Compounds		Analytical Method: SW-846 8260 B				Preparation Method: 5030		
		<b>Result</b>	<b>Units</b>	<b>RL</b>	<b>Flag</b>	<b>Dil</b>	<b>Prepared</b>	<b>Analyzed</b>
trans-1,3-Dichloropropene		ND	ug/kg	8.4		1	07/29/13	07/29/13 16:29
1,1,2-Trichloroethane		ND	ug/kg	8.4		1	07/29/13	07/29/13 16:29
Toluene		ND	ug/kg	8.4		1	07/29/13	07/29/13 16:29
2-Hexanone		ND	ug/kg	33		1	07/29/13	07/29/13 16:29
1,2-Dibromoethane (EDB)		ND	ug/kg	8.4		1	07/29/13	07/29/13 16:29
Dibromochloromethane		ND	ug/kg	8.4		1	07/29/13	07/29/13 16:29
Bromoform		ND	ug/kg	8.4		1	07/29/13	07/29/13 16:29
Tetrachloroethene		ND	ug/kg	8.4		1	07/29/13	07/29/13 16:29
Chlorobenzene		ND	ug/kg	8.4		1	07/29/13	07/29/13 16:29
Ethylbenzene		ND	ug/kg	8.4		1	07/29/13	07/29/13 16:29
m,p-Xylenes		ND	ug/kg	17		1	07/29/13	07/29/13 16:29
Styrene		ND	ug/kg	8.4		1	07/29/13	07/29/13 16:29
1,1,2,2-Tetrachloroethane		ND	ug/kg	8.4		1	07/29/13	07/29/13 16:29
o-Xylene		ND	ug/kg	8.4		1	07/29/13	07/29/13 16:29
Isopropylbenzene		ND	ug/kg	8.4		1	07/29/13	07/29/13 16:29
1,3-Dichlorobenzene		ND	ug/kg	8.4		1	07/29/13	07/29/13 16:29
1,4-Dichlorobenzene		ND	ug/kg	8.4		1	07/29/13	07/29/13 16:29
1,2-Dichlorobenzene		ND	ug/kg	8.4		1	07/29/13	07/29/13 16:29
1,2-Dibromo-3-Chloropropane		ND	ug/kg	67		1	07/29/13	07/29/13 16:29
1,2,4-Trichlorobenzene		ND	ug/kg	8.4		1	07/29/13	07/29/13 16:29
Naphthalene		ND	ug/kg	8.4		1	07/29/13	07/29/13 16:29
1,2,3-Trichlorobenzene		ND	ug/kg	8.4		1	07/29/13	07/29/13 16:29

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 13072314, 13072429, 13072601, 13072911, 13080206

**Whitman, Requardt & Associates, LLP., Fairfax, VA**

August 12, 2013

Project Name: Central Ave.

Project Location: Baltimore, MD

Project ID: 31576-007

Sample ID: CAESB-11 4-6'	Date/Time Sampled: 07/25/2013 14:20				PSS Sample ID: 13072601-003			
Matrix: SOIL	Date/Time Received: 07/26/2013 08:10				% Solids: 60			
TCL Semivolatile Organic Compounds	Analytical Method: SW-846 8270 C				Preparation Method: 3550			
	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Acenaphthene	ND	ug/kg	280	1		07/26/13	07/29/13 12:29	1014
Acenaphthylene	ND	ug/kg	280	1		07/26/13	07/29/13 12:29	1014
Acetophenone	ND	ug/kg	280	1		07/26/13	07/29/13 12:29	1014
Anthracene	ND	ug/kg	280	1		07/26/13	07/29/13 12:29	1014
Benzo(a)anthracene	ND	ug/kg	280	1		07/26/13	07/29/13 12:29	1014
Benzo(a)pyrene	ND	ug/kg	280	1		07/26/13	07/29/13 12:29	1014
Benzo(b)fluoranthene	ND	ug/kg	280	1		07/26/13	07/29/13 12:29	1014
Benzo(g,h,i)perylene	ND	ug/kg	280	1		07/26/13	07/29/13 12:29	1014
Benzo(k)fluoranthene	ND	ug/kg	280	1		07/26/13	07/29/13 12:29	1014
Biphenyl (Diphenyl)	ND	ug/kg	280	1		07/26/13	07/29/13 12:29	1014
Butyl benzyl phthalate	ND	ug/kg	280	1		07/26/13	07/29/13 12:29	1014
bis(2-chloroethoxy) methane	ND	ug/kg	280	1		07/26/13	07/29/13 12:29	1014
bis(2-chloroethyl) ether	ND	ug/kg	280	1		07/26/13	07/29/13 12:29	1014
bis(2-chloroisopropyl) ether	ND	ug/kg	280	1		07/26/13	07/29/13 12:29	1014
bis(2-ethylhexyl) phthalate	ND	ug/kg	280	1		07/26/13	07/29/13 12:29	1014
4-Bromophenylphenyl ether	ND	ug/kg	280	1		07/26/13	07/29/13 12:29	1014
Di-n-butyl phthalate	ND	ug/kg	550	1		07/26/13	07/29/13 12:29	1014
Carbazole	ND	ug/kg	280	1		07/26/13	07/29/13 12:29	1014
4-Chloro-3-methyl phenol	ND	ug/kg	280	1		07/26/13	07/29/13 12:29	1014
4-Chloroaniline	ND	ug/kg	550	1		07/26/13	07/29/13 12:29	1014
2-Chloronaphthalene	ND	ug/kg	280	1		07/26/13	07/29/13 12:29	1014
2-Chlorophenol	ND	ug/kg	280	1		07/26/13	07/29/13 12:29	1014
4-Chlorophenyl Phenyl ether	ND	ug/kg	280	1		07/26/13	07/29/13 12:29	1014
Chrysene	ND	ug/kg	280	1		07/26/13	07/29/13 12:29	1014
Dibenz(a,h)Anthracene	ND	ug/kg	280	1		07/26/13	07/29/13 12:29	1014
Dibenzofuran	ND	ug/kg	280	1		07/26/13	07/29/13 12:29	1014
3,3-Dichlorobenzidine	ND	ug/kg	280	1		07/26/13	07/29/13 12:29	1014
2,4-Dichlorophenol	ND	ug/kg	280	1		07/26/13	07/29/13 12:29	1014
Diethyl phthalate	ND	ug/kg	280	1		07/26/13	07/29/13 12:29	1014
Dimethyl phthalate	ND	ug/kg	280	1		07/26/13	07/29/13 12:29	1014

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 13072314, 13072429, 13072601, 13072911, 13080206

**Whitman, Requardt & Associates, LLP., Fairfax, VA**

August 12, 2013

Project Name: Central Ave.

Project Location: Baltimore, MD

Project ID: 31576-007

Sample ID: CAESB-11 4-6'	Date/Time Sampled: 07/25/2013 14:20				PSS Sample ID: 13072601-003			
Matrix: SOIL	Date/Time Received: 07/26/2013 08:10				% Solids: 60			
TCL Semivolatile Organic Compounds	Analytical Method: SW-846 8270 C				Preparation Method: 3550			
	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
2,4-Dimethylphenol	ND	ug/kg	280	1		07/26/13	07/29/13 12:29	1014
4,6-Dinitro-2-methyl phenol	ND	ug/kg	280	1		07/26/13	07/29/13 12:29	1014
2,4-Dinitrophenol	ND	ug/kg	550	1		07/26/13	07/29/13 12:29	1014
2,4-Dinitrotoluene	ND	ug/kg	280	1		07/26/13	07/29/13 12:29	1014
2,6-Dinitrotoluene	ND	ug/kg	280	1		07/26/13	07/29/13 12:29	1014
Fluoranthene	ND	ug/kg	280	1		07/26/13	07/29/13 12:29	1014
Fluorene	ND	ug/kg	280	1		07/26/13	07/29/13 12:29	1014
Hexachlorobenzene	ND	ug/kg	280	1		07/26/13	07/29/13 12:29	1014
Hexachlorobutadiene	ND	ug/kg	280	1		07/26/13	07/29/13 12:29	1014
Hexachlorocyclopentadiene	ND	ug/kg	280	1		07/26/13	07/29/13 12:29	1014
Hexachloroethane	ND	ug/kg	280	1		07/26/13	07/29/13 12:29	1014
Indeno(1,2,3-c,d)Pyrene	ND	ug/kg	280	1		07/26/13	07/29/13 12:29	1014
Isophorone	ND	ug/kg	280	1		07/26/13	07/29/13 12:29	1014
2-Methylnaphthalene	ND	ug/kg	280	1		07/26/13	07/29/13 12:29	1014
2-Methyl phenol	ND	ug/kg	280	1		07/26/13	07/29/13 12:29	1014
3&4-Methylphenol	ND	ug/kg	280	1		07/26/13	07/29/13 12:29	1014
Naphthalene	ND	ug/kg	280	1		07/26/13	07/29/13 12:29	1014
4-Nitroaniline	ND	ug/kg	280	1		07/26/13	07/29/13 12:29	1014
3-Nitroaniline	ND	ug/kg	280	1		07/26/13	07/29/13 12:29	1014
2-Nitroaniline	ND	ug/kg	550	1		07/26/13	07/29/13 12:29	1014
Nitrobenzene	ND	ug/kg	280	1		07/26/13	07/29/13 12:29	1014
2-Nitrophenol	ND	ug/kg	280	1		07/26/13	07/29/13 12:29	1014
4-Nitrophenol	ND	ug/kg	280	1		07/26/13	07/29/13 12:29	1014
N-Nitrosodi-n-propyl amine	ND	ug/kg	280	1		07/26/13	07/29/13 12:29	1014
N-Nitrosodiphenylamine	ND	ug/kg	280	1		07/26/13	07/29/13 12:29	1014
Di-n-octyl phthalate	ND	ug/kg	280	1		07/26/13	07/29/13 12:29	1014
Pentachlorophenol	ND	ug/kg	550	1		07/26/13	07/29/13 12:29	1014
Phenanthrene	ND	ug/kg	280	1		07/26/13	07/29/13 12:29	1014
Phenol	ND	ug/kg	280	1		07/26/13	07/29/13 12:29	1014
Atrazine	ND	ug/kg	280	1		07/26/13	07/29/13 12:29	1014

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 13072314, 13072429, 13072601, 13072911, 13080206

**Whitman, Requardt & Associates, LLP., Fairfax, VA**

August 12, 2013

Project Name: Central Ave.

Project Location: Baltimore, MD

Project ID: 31576-007

<b>Sample ID: CAESB-11 4-6'</b>	<b>Date/Time Sampled: 07/25/2013 14:20</b>					<b>PSS Sample ID: 13072601-003</b>		
<b>Matrix: SOIL</b>	<b>Date/Time Received: 07/26/2013 08:10</b>					<b>% Solids: 60</b>		
TCL Semivolatile Organic Compounds	Analytical Method: SW-846 8270 C					Preparation Method: 3550		
	<b>Result</b>	<b>Units</b>	<b>RL</b>	<b>Flag</b>	<b>Dil</b>	<b>Prepared</b>	<b>Analyzed</b>	<b>Analyst</b>
Pyrene	ND	ug/kg	280	1		07/26/13	07/29/13 12:29	1014
Pyridine	ND	ug/kg	280	1		07/26/13	07/29/13 12:29	1014
Caprolactam	ND	ug/kg	280	1		07/26/13	07/29/13 12:29	1014
2,4,6-Trichlorophenol	ND	ug/kg	280	1		07/26/13	07/29/13 12:29	1014
2,4,5-Trichlorophenol	ND	ug/kg	280	1		07/26/13	07/29/13 12:29	1014
<b>Sample ID: CAESB-11 2-10'</b>	<b>Date/Time Sampled: 07/25/2013 14:20</b>					<b>PSS Sample ID: 13072601-004</b>		
<b>Matrix: SOIL</b>	<b>Date/Time Received: 07/26/2013 08:10</b>					<b>% Solids: 67</b>		
PP Metals	Analytical Method: SW-846 6020 A					Preparation Method: 3050B		
	<b>Result</b>	<b>Units</b>	<b>RL</b>	<b>Flag</b>	<b>Dil</b>	<b>Prepared</b>	<b>Analyzed</b>	<b>Analyst</b>
Antimony	ND	mg/kg	3.3	1		07/29/13	07/31/13 15:57	1033
Arsenic	<b>4.2</b>	mg/kg	0.65	1		07/29/13	07/30/13 16:27	1033
Beryllium	ND	mg/kg	3.3	1		07/29/13	07/31/13 15:57	1033
Cadmium	ND	mg/kg	3.3	1		07/29/13	07/30/13 16:27	1033
Chromium	<b>42</b>	mg/kg	3.3	1		07/29/13	07/30/13 16:27	1033
Copper	<b>15</b>	mg/kg	3.3	1		07/29/13	07/30/13 16:27	1033
Lead	<b>15</b>	mg/kg	3.3	1		07/29/13	07/30/13 16:27	1033
Mercury	ND	mg/kg	0.13	1		07/29/13	07/30/13 16:27	1033
Nickel	<b>24</b>	mg/kg	3.3	1		07/29/13	07/30/13 16:27	1033
Selenium	ND	mg/kg	3.3	1		07/29/13	07/31/13 15:57	1033
Silver	ND	mg/kg	3.3	1		07/29/13	07/30/13 16:27	1033
Thallium	ND	mg/kg	2.6	1		07/29/13	07/30/13 16:27	1033
Zinc	<b>40</b>	mg/kg	13	1		07/29/13	07/31/13 15:57	1033

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 13072314, 13072429, 13072601, 13072911, 13080206

**Whitman, Requardt & Associates, LLP., Fairfax, VA**

August 12, 2013

Project Name: Central Ave.

Project Location: Baltimore, MD

Project ID: 31576-007

<b>Sample ID: CAESB-11 10-20'</b>	<b>Date/Time Sampled: 07/25/2013 14:20</b>				<b>PSS Sample ID: 13072601-005</b>			
<b>Matrix: SOIL</b>	<b>Date/Time Received: 07/26/2013 08:10</b>				<b>% Solids: 68</b>			
PP Metals	Analytical Method: SW-846 6020 A				Preparation Method: 3050B			
	<b>Result</b>	<b>Units</b>	<b>RL</b>	<b>Flag</b>	<b>Dil</b>	<b>Prepared</b>	<b>Analyzed</b>	<b>Analyst</b>
Antimony	ND	mg/kg	3.3	1		07/29/13	07/31/13 16:03	1033
Arsenic	<b>4.0</b>	mg/kg	0.67	1		07/29/13	07/30/13 16:33	1033
Beryllium	ND	mg/kg	3.3	1		07/29/13	07/31/13 16:03	1033
Cadmium	ND	mg/kg	3.3	1		07/29/13	07/30/13 16:33	1033
Chromium	<b>42</b>	mg/kg	3.3	1		07/29/13	07/30/13 16:33	1033
Copper	<b>21</b>	mg/kg	3.3	1		07/29/13	07/30/13 16:33	1033
Lead	<b>29</b>	mg/kg	3.3	1		07/29/13	07/30/13 16:33	1033
Mercury	<b>0.27</b>	mg/kg	0.13	1		07/29/13	07/30/13 16:33	1033
Nickel	<b>22</b>	mg/kg	3.3	1		07/29/13	07/30/13 16:33	1033
Selenium	ND	mg/kg	3.3	1		07/29/13	07/31/13 16:03	1033
Silver	ND	mg/kg	3.3	1		07/29/13	07/30/13 16:33	1033
Thallium	ND	mg/kg	2.7	1		07/29/13	07/30/13 16:33	1033
Zinc	<b>38</b>	mg/kg	13	1		07/29/13	07/31/13 16:03	1033

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 13072314, 13072429, 13072601, 13072911, 13080206

**Whitman, Requardt & Associates, LLP., Fairfax, VA**

August 12, 2013

Project Name: Central Ave.

Project Location: Baltimore, MD

Project ID: 31576-007

<b>Sample ID: CAESB-9 6-8'</b>	<b>Date/Time Sampled: 07/25/2013 17:30</b>			<b>PSS Sample ID: 13072601-006</b>		
<b>Matrix: SOIL</b>	<b>Date/Time Received: 07/26/2013 08:10</b>			<b>% Solids: 79</b>		
Total Petroleum Hydrocarbons - DRO	Analytical Method: SW-846 8015 C			Preparation Method: 3550		
DF/HF - No. 2/diesel fuel and heavier fuel/oil patterns observed in sample.	<b>Result</b>	<b>Units</b>	<b>RL</b>	<b>Flag</b>	<b>Dil</b>	<b>Prepared</b>
TPH-DRO (Diesel Range Organics)	71	mg/kg	5.0	DF	1	07/30/13 07/30/13 15:34 1040
Total Petroleum Hydrocarbons-GRO	Analytical Method: SW-846 8015C			Preparation Method: 5030		
TPH-GRO (Gasoline Range Organics)	<b>Result</b>	<b>Units</b>	<b>RL</b>	<b>Flag</b>	<b>Dil</b>	<b>Prepared</b>
	ND	ug/kg	130		1	07/26/13 07/26/13 19:46 1035

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 13072314, 13072429, 13072601, 13072911, 13080206

**Whitman, Requardt & Associates, LLP., Fairfax, VA**

August 12, 2013

Project Name: Central Ave.

Project Location: Baltimore, MD

Project ID: 31576-007

<b>Sample ID: CAESB-9 6-8'</b>		<b>Date/Time Sampled: 07/25/2013 17:30</b>				<b>PSS Sample ID: 13072601-006</b>		
<b>Matrix: SOIL</b>		<b>Date/Time Received: 07/26/2013 08:10</b>				<b>% Solids: 79</b>		
TCL Volatile Organic Compounds		Analytical Method: SW-846 8260 B				Preparation Method: 5030		
		<b>Result</b>	<b>Units</b>	<b>RL</b>	<b>Flag</b>	<b>Dil</b>	<b>Prepared</b>	<b>Analyzed</b>
Dichlorodifluoromethane		ND	ug/kg	6.4		1	07/29/13	07/29/13 16:57
Chloromethane		ND	ug/kg	6.4		1	07/29/13	07/29/13 16:57
1,1,2-Trichloro-1,2,2-Trifluoroethane		ND	ug/kg	6.4		1	07/29/13	07/29/13 16:57
Vinyl Chloride		ND	ug/kg	6.4		1	07/29/13	07/29/13 16:57
Bromomethane		ND	ug/kg	6.4		1	07/29/13	07/29/13 16:57
Chloroethane		ND	ug/kg	6.4		1	07/29/13	07/29/13 16:57
Acetone		34	ug/kg	26		1	07/29/13	07/29/13 16:57
Cyclohexane		ND	ug/kg	26		1	07/29/13	07/29/13 16:57
Trichlorofluoromethane		ND	ug/kg	6.4		1	07/29/13	07/29/13 16:57
1,1-Dichloroethene		ND	ug/kg	6.4		1	07/29/13	07/29/13 16:57
Methylene Chloride		ND	ug/kg	6.4		1	07/29/13	07/29/13 16:57
trans-1,2-Dichloroethene		ND	ug/kg	6.4		1	07/29/13	07/29/13 16:57
Methyl-t-butyl ether		ND	ug/kg	6.4		1	07/29/13	07/29/13 16:57
1,1-Dichloroethane		ND	ug/kg	6.4		1	07/29/13	07/29/13 16:57
2-Butanone (MEK)		ND	ug/kg	26		1	07/29/13	07/29/13 16:57
cis-1,2-Dichloroethene		ND	ug/kg	6.4		1	07/29/13	07/29/13 16:57
Bromochloromethane		ND	ug/kg	6.4		1	07/29/13	07/29/13 16:57
Chloroform		ND	ug/kg	6.4		1	07/29/13	07/29/13 16:57
1,1,1-Trichloroethane		ND	ug/kg	6.4		1	07/29/13	07/29/13 16:57
1,2-Dichloroethane		ND	ug/kg	6.4		1	07/29/13	07/29/13 16:57
Carbon Tetrachloride		ND	ug/kg	6.4		1	07/29/13	07/29/13 16:57
Benzene		ND	ug/kg	6.4		1	07/29/13	07/29/13 16:57
1,2-Dichloropropane		ND	ug/kg	6.4		1	07/29/13	07/29/13 16:57
Carbon Disulfide		ND	ug/kg	13		1	07/29/13	07/29/13 16:57
Methylcyclohexane		ND	ug/kg	26		1	07/29/13	07/29/13 16:57
Trichloroethene		ND	ug/kg	6.4		1	07/29/13	07/29/13 16:57
Methyl Acetate		ND	ug/kg	26		1	07/29/13	07/29/13 16:57
Bromodichloromethane		ND	ug/kg	6.4		1	07/29/13	07/29/13 16:57
cis-1,3-Dichloropropene		ND	ug/kg	6.4		1	07/29/13	07/29/13 16:57
4-Methyl-2-Pantanone		ND	ug/kg	26		1	07/29/13	07/29/13 16:57

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 13072314, 13072429, 13072601, 13072911, 13080206

**Whitman, Requardt & Associates, LLP., Fairfax, VA**

August 12, 2013

Project Name: Central Ave.

Project Location: Baltimore, MD

Project ID: 31576-007

Sample ID: CAESB-9 6-8'	Date/Time Sampled: 07/25/2013 17:30 PSS Sample ID: 13072601-006				
Matrix: SOIL	Date/Time Received: 07/26/2013 08:10 % Solids: 79				
TCL Volatile Organic Compounds	Analytical Method: SW-846 8260 B			Preparation Method: 5030	
	Result	Units	RL	Flag	Dil
trans-1,3-Dichloropropene	ND	ug/kg	6.4	1	07/29/13 07/29/13 16:57 1011
1,1,2-Trichloroethane	ND	ug/kg	6.4	1	07/29/13 07/29/13 16:57 1011
Toluene	ND	ug/kg	6.4	1	07/29/13 07/29/13 16:57 1011
2-Hexanone	ND	ug/kg	26	1	07/29/13 07/29/13 16:57 1011
1,2-Dibromoethane (EDB)	ND	ug/kg	6.4	1	07/29/13 07/29/13 16:57 1011
Dibromochloromethane	ND	ug/kg	6.4	1	07/29/13 07/29/13 16:57 1011
Bromoform	ND	ug/kg	6.4	1	07/29/13 07/29/13 16:57 1011
Tetrachloroethene	ND	ug/kg	6.4	1	07/29/13 07/29/13 16:57 1011
Chlorobenzene	ND	ug/kg	6.4	1	07/29/13 07/29/13 16:57 1011
Ethylbenzene	ND	ug/kg	6.4	1	07/29/13 07/29/13 16:57 1011
m,p-Xylenes	ND	ug/kg	13	1	07/29/13 07/29/13 16:57 1011
Styrene	ND	ug/kg	6.4	1	07/29/13 07/29/13 16:57 1011
1,1,2,2-Tetrachloroethane	ND	ug/kg	6.4	1	07/29/13 07/29/13 16:57 1011
o-Xylene	ND	ug/kg	6.4	1	07/29/13 07/29/13 16:57 1011
Isopropylbenzene	ND	ug/kg	6.4	1	07/29/13 07/29/13 16:57 1011
1,3-Dichlorobenzene	ND	ug/kg	6.4	1	07/29/13 07/29/13 16:57 1011
1,4-Dichlorobenzene	ND	ug/kg	6.4	1	07/29/13 07/29/13 16:57 1011
1,2-Dichlorobenzene	ND	ug/kg	6.4	1	07/29/13 07/29/13 16:57 1011
1,2-Dibromo-3-Chloropropane	ND	ug/kg	51	1	07/29/13 07/29/13 16:57 1011
1,2,4-Trichlorobenzene	ND	ug/kg	6.4	1	07/29/13 07/29/13 16:57 1011
Naphthalene	ND	ug/kg	6.4	1	07/29/13 07/29/13 16:57 1011
1,2,3-Trichlorobenzene	ND	ug/kg	6.4	1	07/29/13 07/29/13 16:57 1011

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 13072314, 13072429, 13072601, 13072911, 13080206

**Whitman, Requardt & Associates, LLP., Fairfax, VA**

August 12, 2013

Project Name: Central Ave.

Project Location: Baltimore, MD

Project ID: 31576-007

Sample ID: CAESB-9 6-8'	Date/Time Sampled: 07/25/2013 17:30 PSS Sample ID: 13072601-006				
Matrix: SOIL	Date/Time Received: 07/26/2013 08:10 % Solids: 79				
TCL Semivolatile Organic Compounds	Analytical Method: SW-846 8270 C			Preparation Method: 3550	
	Result	Units	RL	Flag	Dil
Acenaphthene	ND	ug/kg	210	1	07/26/13 07/29/13 12:58 1014
Acenaphthylene	ND	ug/kg	210	1	07/26/13 07/29/13 12:58 1014
Acetophenone	ND	ug/kg	210	1	07/26/13 07/29/13 12:58 1014
Anthracene	ND	ug/kg	210	1	07/26/13 07/29/13 12:58 1014
Benzo(a)anthracene	ND	ug/kg	210	1	07/26/13 07/29/13 12:58 1014
Benzo(a)pyrene	ND	ug/kg	210	1	07/26/13 07/29/13 12:58 1014
Benzo(b)fluoranthene	ND	ug/kg	210	1	07/26/13 07/29/13 12:58 1014
Benzo(g,h,i)perylene	ND	ug/kg	210	1	07/26/13 07/29/13 12:58 1014
Benzo(k)fluoranthene	ND	ug/kg	210	1	07/26/13 07/29/13 12:58 1014
Biphenyl (Diphenyl)	ND	ug/kg	210	1	07/26/13 07/29/13 12:58 1014
Butyl benzyl phthalate	ND	ug/kg	210	1	07/26/13 07/29/13 12:58 1014
bis(2-chloroethoxy) methane	ND	ug/kg	210	1	07/26/13 07/29/13 12:58 1014
bis(2-chloroethyl) ether	ND	ug/kg	210	1	07/26/13 07/29/13 12:58 1014
bis(2-chloroisopropyl) ether	ND	ug/kg	210	1	07/26/13 07/29/13 12:58 1014
bis(2-ethylhexyl) phthalate	ND	ug/kg	210	1	07/26/13 07/29/13 12:58 1014
4-Bromophenylphenyl ether	ND	ug/kg	210	1	07/26/13 07/29/13 12:58 1014
Di-n-butyl phthalate	ND	ug/kg	420	1	07/26/13 07/29/13 12:58 1014
Carbazole	ND	ug/kg	210	1	07/26/13 07/29/13 12:58 1014
4-Chloro-3-methyl phenol	ND	ug/kg	210	1	07/26/13 07/29/13 12:58 1014
4-Chloroaniline	ND	ug/kg	420	1	07/26/13 07/29/13 12:58 1014
2-Chloronaphthalene	ND	ug/kg	210	1	07/26/13 07/29/13 12:58 1014
2-Chlorophenol	ND	ug/kg	210	1	07/26/13 07/29/13 12:58 1014
4-Chlorophenyl Phenyl ether	ND	ug/kg	210	1	07/26/13 07/29/13 12:58 1014
Chrysene	ND	ug/kg	210	1	07/26/13 07/29/13 12:58 1014
Dibenz(a,h)Anthracene	ND	ug/kg	210	1	07/26/13 07/29/13 12:58 1014
Dibenzofuran	ND	ug/kg	210	1	07/26/13 07/29/13 12:58 1014
3,3-Dichlorobenzidine	ND	ug/kg	210	1	07/26/13 07/29/13 12:58 1014
2,4-Dichlorophenol	ND	ug/kg	210	1	07/26/13 07/29/13 12:58 1014
Diethyl phthalate	ND	ug/kg	210	1	07/26/13 07/29/13 12:58 1014
Dimethyl phthalate	ND	ug/kg	210	1	07/26/13 07/29/13 12:58 1014

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 13072314, 13072429, 13072601, 13072911, 13080206

**Whitman, Requardt & Associates, LLP., Fairfax, VA**

August 12, 2013

Project Name: Central Ave.

Project Location: Baltimore, MD

Project ID: 31576-007

<b>Sample ID: CAESB-9 6-8'</b>		<b>Date/Time Sampled: 07/25/2013 17:30</b>			<b>PSS Sample ID: 13072601-006</b>		
<b>Matrix: SOIL</b>		<b>Date/Time Received: 07/26/2013 08:10</b>			<b>% Solids: 79</b>		
TCL Semivolatile Organic Compounds		Analytical Method: SW-846 8270 C			Preparation Method: 3550		
		<b>Result</b>	<b>Units</b>	<b>RL</b>	<b>Flag</b>	<b>Dil</b>	<b>Prepared</b>
2,4-Dimethylphenol		ND	ug/kg	210	1	1	07/26/13 07/29/13 12:58
4,6-Dinitro-2-methyl phenol		ND	ug/kg	210	1	1	07/26/13 07/29/13 12:58
2,4-Dinitrophenol		ND	ug/kg	420	1	1	07/26/13 07/29/13 12:58
2,4-Dinitrotoluene		ND	ug/kg	210	1	1	07/26/13 07/29/13 12:58
2,6-Dinitrotoluene		ND	ug/kg	210	1	1	07/26/13 07/29/13 12:58
Fluoranthene		ND	ug/kg	210	1	1	07/26/13 07/29/13 12:58
Fluorene		ND	ug/kg	210	1	1	07/26/13 07/29/13 12:58
Hexachlorobenzene		ND	ug/kg	210	1	1	07/26/13 07/29/13 12:58
Hexachlorobutadiene		ND	ug/kg	210	1	1	07/26/13 07/29/13 12:58
Hexachlorocyclopentadiene		ND	ug/kg	210	1	1	07/26/13 07/29/13 12:58
Hexachloroethane		ND	ug/kg	210	1	1	07/26/13 07/29/13 12:58
Indeno(1,2,3-c,d)Pyrene		ND	ug/kg	210	1	1	07/26/13 07/29/13 12:58
Isophorone		ND	ug/kg	210	1	1	07/26/13 07/29/13 12:58
2-Methylnaphthalene		ND	ug/kg	210	1	1	07/26/13 07/29/13 12:58
2-Methyl phenol		ND	ug/kg	210	1	1	07/26/13 07/29/13 12:58
3&4-Methylphenol		ND	ug/kg	210	1	1	07/26/13 07/29/13 12:58
Naphthalene		ND	ug/kg	210	1	1	07/26/13 07/29/13 12:58
4-Nitroaniline		ND	ug/kg	210	1	1	07/26/13 07/29/13 12:58
3-Nitroaniline		ND	ug/kg	210	1	1	07/26/13 07/29/13 12:58
2-Nitroaniline		ND	ug/kg	420	1	1	07/26/13 07/29/13 12:58
Nitrobenzene		ND	ug/kg	210	1	1	07/26/13 07/29/13 12:58
2-Nitrophenol		ND	ug/kg	210	1	1	07/26/13 07/29/13 12:58
4-Nitrophenol		ND	ug/kg	210	1	1	07/26/13 07/29/13 12:58
N-Nitrosodi-n-propyl amine		ND	ug/kg	210	1	1	07/26/13 07/29/13 12:58
N-Nitrosodiphenylamine		ND	ug/kg	210	1	1	07/26/13 07/29/13 12:58
Di-n-octyl phthalate		ND	ug/kg	210	1	1	07/26/13 07/29/13 12:58
Pentachlorophenol		ND	ug/kg	420	1	1	07/26/13 07/29/13 12:58
Phenanthrene		ND	ug/kg	210	1	1	07/26/13 07/29/13 12:58
Phenol		ND	ug/kg	210	1	1	07/26/13 07/29/13 12:58
Atrazine		ND	ug/kg	210	1	1	07/26/13 07/29/13 12:58

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 13072314, 13072429, 13072601, 13072911, 13080206

**Whitman, Requardt & Associates, LLP., Fairfax, VA**

August 12, 2013

Project Name: Central Ave.

Project Location: Baltimore, MD

Project ID: 31576-007

<b>Sample ID: CAESB-9 6-8'</b>	<b>Date/Time Sampled: 07/25/2013 17:30 PSS Sample ID: 13072601-006</b>						
<b>Matrix: SOIL</b>	<b>Date/Time Received: 07/26/2013 08:10</b>			<b>% Solids: 79</b>			
TCL Semivolatile Organic Compounds	Analytical Method: SW-846 8270 C			Preparation Method: 3550			
	<b>Result</b>	<b>Units</b>	<b>RL</b>	<b>Flag</b>	<b>Dil</b>	<b>Prepared</b>	<b>Analyzed</b>
Pyrene	ND	ug/kg	210	1	1	07/26/13	07/29/13 12:58 1014
Pyridine	ND	ug/kg	210	1	1	07/26/13	07/29/13 12:58 1014
Caprolactam	ND	ug/kg	210	1	1	07/26/13	07/29/13 12:58 1014
2,4,6-Trichlorophenol	ND	ug/kg	210	1	1	07/26/13	07/29/13 12:58 1014
2,4,5-Trichlorophenol	ND	ug/kg	210	1	1	07/26/13	07/29/13 12:58 1014
<b>Sample ID: CAESB-9 2-10'</b>	<b>Date/Time Sampled: 07/25/2013 17:30 PSS Sample ID: 13072601-007</b>						
<b>Matrix: SOIL</b>	<b>Date/Time Received: 07/26/2013 08:10</b>			<b>% Solids: 83</b>			
PP Metals	Analytical Method: SW-846 6020 A			Preparation Method: 3050B			
	<b>Result</b>	<b>Units</b>	<b>RL</b>	<b>Flag</b>	<b>Dil</b>	<b>Prepared</b>	<b>Analyzed</b>
Antimony	ND	mg/kg	2.8	1	1	07/29/13	07/31/13 16:09 1033
Arsenic	<b>2.7</b>	mg/kg	0.55	1	1	07/29/13	07/30/13 17:04 1033
Beryllium	ND	mg/kg	2.8	1	1	07/29/13	07/31/13 16:09 1033
Cadmium	ND	mg/kg	2.8	1	1	07/29/13	07/30/13 17:04 1033
Chromium	<b>28</b>	mg/kg	2.8	1	1	07/29/13	07/30/13 17:04 1033
Copper	<b>15</b>	mg/kg	2.8	1	1	07/29/13	07/30/13 17:04 1033
Lead	<b>260</b>	mg/kg	2.8	1	1	07/29/13	07/30/13 17:04 1033
Mercury	<b>0.26</b>	mg/kg	0.11	1	1	07/29/13	07/30/13 17:04 1033
Nickel	<b>10</b>	mg/kg	2.8	1	1	07/29/13	07/30/13 17:04 1033
Selenium	ND	mg/kg	2.8	1	1	07/29/13	07/31/13 16:09 1033
Silver	ND	mg/kg	2.8	1	1	07/29/13	07/31/13 16:09 1033
Thallium	ND	mg/kg	2.2	1	1	07/29/13	07/30/13 17:04 1033
Zinc	<b>34</b>	mg/kg	11	1	1	07/29/13	07/31/13 16:09 1033

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 13072314, 13072429, 13072601, 13072911, 13080206

**Whitman, Requardt & Associates, LLP., Fairfax, VA**

August 12, 2013

Project Name: Central Ave.

Project Location: Baltimore, MD

Project ID: 31576-007

<b>Sample ID: CAESB-9 10-20'</b>	<b>Date/Time Sampled: 07/25/2013 17:30</b>				<b>PSS Sample ID: 13072601-008</b>			
<b>Matrix: SOIL</b>	<b>Date/Time Received: 07/26/2013 08:10</b>				<b>% Solids: 70</b>			
PP Metals	Analytical Method: SW-846 6020 A				Preparation Method: 3050B			
	<b>Result</b>	<b>Units</b>	<b>RL</b>	<b>Flag</b>	<b>Dil</b>	<b>Prepared</b>	<b>Analyzed</b>	<b>Analyst</b>
Antimony	ND	mg/kg	3.0	1		07/29/13	07/31/13 16:15	1033
Arsenic	<b>2.4</b>	mg/kg	0.60	1		07/29/13	07/30/13 17:10	1033
Beryllium	ND	mg/kg	3.0	1		07/29/13	07/31/13 16:15	1033
Cadmium	ND	mg/kg	3.0	1		07/29/13	07/30/13 17:10	1033
Chromium	<b>28</b>	mg/kg	3.0	1		07/29/13	07/30/13 17:10	1033
Copper	<b>10</b>	mg/kg	3.0	1		07/29/13	07/30/13 17:10	1033
Lead	<b>30</b>	mg/kg	3.0	1		07/29/13	07/30/13 17:10	1033
Mercury	ND	mg/kg	0.12	1		07/29/13	07/30/13 17:10	1033
Nickel	<b>17</b>	mg/kg	3.0	1		07/29/13	07/30/13 17:10	1033
Selenium	ND	mg/kg	3.0	1		07/29/13	07/31/13 16:15	1033
Silver	ND	mg/kg	3.0	1		07/29/13	07/31/13 16:15	1033
Thallium	ND	mg/kg	2.4	1		07/29/13	07/30/13 17:10	1033
Zinc	<b>25</b>	mg/kg	12	1		07/29/13	07/31/13 16:15	1033

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 13072314, 13072429, 13072601, 13072911, 13080206

**Whitman, Requardt & Associates, LLP., Fairfax, VA**

August 12, 2013

Project Name: Central Ave.

Project Location: Baltimore, MD

Project ID: 31576-007

<b>Sample ID: CAESB-11</b>	<b>Date/Time Sampled: 07/29/2013 09:00 PSS Sample ID: 13072911-001</b>							
<b>Matrix: GROUND WATER</b>	<b>Date/Time Received: 07/29/2013 13:21</b>							
Dissolved PP Metals	Analytical Method: SW-846 6020 A				Preparation Method: 3005A			
	<b>Result</b>	<b>Units</b>	<b>RL</b>	<b>Flag</b>	<b>Dil</b>	<b>Prepared</b>	<b>Analyzed</b>	<b>Analyst</b>
Antimony	ND	ug/L	5.0	1		08/02/13	08/02/13 15:14	1033
Arsenic	ND	ug/L	1.0	1		08/02/13	08/02/13 15:14	1033
Beryllium	ND	ug/L	1.0	1		08/02/13	08/02/13 15:14	1033
Cadmium	ND	ug/L	1.0	1		08/02/13	08/02/13 15:14	1033
Chromium	ND	ug/L	1.0	1		08/02/13	08/02/13 15:14	1033
Copper	ND	ug/L	1.0	1		08/02/13	08/02/13 15:14	1033
Lead	ND	ug/L	1.0	1		08/02/13	08/02/13 15:14	1033
Mercury	ND	ug/L	0.20	1		08/02/13	08/02/13 15:14	1033
Nickel	ND	ug/L	1.0	1		08/02/13	08/02/13 15:14	1033
Selenium	ND	ug/L	1.0	1		08/02/13	08/02/13 15:14	1033
Silver	ND	ug/L	1.0	1		08/02/13	08/02/13 15:14	1033
Thallium	ND	ug/L	1.0	1		08/02/13	08/02/13 15:14	1033
Zinc	ND	ug/L	20	1		08/02/13	08/02/13 15:14	1033
Total Petroleum Hydrocarbons - DRO	Analytical Method: SW-846 8015 C				Preparation Method: 3510C			
	<b>Result</b>	<b>Units</b>	<b>RL</b>	<b>Flag</b>	<b>Dil</b>	<b>Prepared</b>	<b>Analyzed</b>	<b>Analyst</b>
TPH-DRO (Diesel Range Organics)	ND	mg/L	0.10	1		07/30/13	07/30/13 10:44	1040
Total Petroleum Hydrocarbons-GRO	Analytical Method: SW-846 8015C				Preparation Method: 5030B			
	<b>Result</b>	<b>Units</b>	<b>RL</b>	<b>Flag</b>	<b>Dil</b>	<b>Prepared</b>	<b>Analyzed</b>	<b>Analyst</b>
TPH-GRO (Gasoline Range Organics)	ND	ug/L	100	1		07/29/13	07/29/13 18:07	1035

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 13072314, 13072429, 13072601, 13072911, 13080206

**Whitman, Requardt & Associates, LLP., Fairfax, VA**

August 12, 2013

Project Name: Central Ave.

Project Location: Baltimore, MD

Project ID: 31576-007

<b>Sample ID: CAESB-11</b>		<b>Date/Time Sampled: 07/29/2013 09:00</b>				<b>PSS Sample ID: 13072911-001</b>		
<b>Matrix: GROUND WATER</b>		<b>Date/Time Received: 07/29/2013 13:21</b>						
TCL Volatile Organic Compounds <i>pH=4</i>		Analytical Method: SW-846 8260 B			Preparation Method: 5030B			
		<b>Result</b>	<b>Units</b>	<b>RL</b>	<b>Flag</b>	<b>Dil</b>	<b>Prepared</b>	<b>Analyzed</b>
Dichlorodifluoromethane		ND	ug/L	1.0	1	1	07/30/13	07/31/13 06:20
Chloromethane		ND	ug/L	1.0	1	1	07/30/13	07/31/13 06:20
1,1,2-Trichloro-1,2,2-Trifluoroethane		ND	ug/L	1.0	1	1	07/30/13	07/31/13 06:20
Vinyl Chloride		ND	ug/L	1.0	1	1	07/30/13	07/31/13 06:20
Bromomethane		ND	ug/L	1.0	1	1	07/30/13	07/31/13 06:20
Chloroethane		ND	ug/L	1.0	1	1	07/30/13	07/31/13 06:20
Acetone		ND	ug/L	10	1	1	07/30/13	07/31/13 06:20
Cyclohexane		ND	ug/L	10	1	1	07/30/13	07/31/13 06:20
Trichlorofluoromethane		ND	ug/L	5.0	1	1	07/30/13	07/31/13 06:20
1,1-Dichloroethene		ND	ug/L	1.0	1	1	07/30/13	07/31/13 06:20
Methylene Chloride		ND	ug/L	1.0	1	1	07/30/13	07/31/13 06:20
trans-1,2-Dichloroethene		ND	ug/L	1.0	1	1	07/30/13	07/31/13 06:20
Methyl-t-butyl ether		ND	ug/L	1.0	1	1	07/30/13	07/31/13 06:20
1,1-Dichloroethane		ND	ug/L	1.0	1	1	07/30/13	07/31/13 06:20
2-Butanone (MEK)		ND	ug/L	10	1	1	07/30/13	07/31/13 06:20
cis-1,2-Dichloroethene		ND	ug/L	1.0	1	1	07/30/13	07/31/13 06:20
Bromochloromethane		ND	ug/L	1.0	1	1	07/30/13	07/31/13 06:20
Chloroform		ND	ug/L	1.0	1	1	07/30/13	07/31/13 06:20
1,1,1-Trichloroethane		ND	ug/L	1.0	1	1	07/30/13	07/31/13 06:20
1,2-Dichloroethane		ND	ug/L	1.0	1	1	07/30/13	07/31/13 06:20
Carbon Tetrachloride		ND	ug/L	1.0	1	1	07/30/13	07/31/13 06:20
Benzene		ND	ug/L	1.0	1	1	07/30/13	07/31/13 06:20
1,2-Dichloropropane		ND	ug/L	1.0	1	1	07/30/13	07/31/13 06:20
Methyl Acetate		ND	ug/L	10	1	1	07/30/13	07/31/13 06:20
Methylcyclohexane		ND	ug/L	10	1	1	07/30/13	07/31/13 06:20
Trichloroethene		ND	ug/L	1.0	1	1	07/30/13	07/31/13 06:20
Carbon Disulfide		ND	ug/L	10	1	1	07/30/13	07/31/13 06:20
Bromodichloromethane		ND	ug/L	1.0	1	1	07/30/13	07/31/13 06:20
cis-1,3-Dichloropropene		ND	ug/L	1.0	1	1	07/30/13	07/31/13 06:20
4-Methyl-2-Pantanone		ND	ug/L	5.0	1	1	07/30/13	07/31/13 06:20

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 13072314, 13072429, 13072601, 13072911, 13080206

**Whitman, Requardt & Associates, LLP., Fairfax, VA**

August 12, 2013

Project Name: Central Ave.

Project Location: Baltimore, MD

Project ID: 31576-007

<b>Sample ID: CAESB-11</b>		<b>Date/Time Sampled: 07/29/2013 09:00</b>				<b>PSS Sample ID: 13072911-001</b>		
<b>Matrix: GROUND WATER</b>		<b>Date/Time Received: 07/29/2013 13:21</b>						
TCL Volatile Organic Compounds <i>pH=4</i>		Analytical Method: SW-846 8260 B			Preparation Method: 5030B			
		<b>Result</b>	<b>Units</b>	<b>RL</b>	<b>Flag</b>	<b>Dil</b>	<b>Prepared</b>	<b>Analyzed</b>
trans-1,3-Dichloropropene		ND	ug/L	1.0	1	1	07/30/13	07/31/13 06:20
1,1,2-Trichloroethane		ND	ug/L	1.0	1	1	07/30/13	07/31/13 06:20
Toluene		ND	ug/L	1.0	1	1	07/30/13	07/31/13 06:20
2-Hexanone		ND	ug/L	10	1	1	07/30/13	07/31/13 06:20
1,2-Dibromoethane (EDB)		ND	ug/L	1.0	1	1	07/30/13	07/31/13 06:20
Dibromochloromethane		ND	ug/L	1.0	1	1	07/30/13	07/31/13 06:20
Bromoform		ND	ug/L	5.0	1	1	07/30/13	07/31/13 06:20
Tetrachloroethene		ND	ug/L	1.0	1	1	07/30/13	07/31/13 06:20
Chlorobenzene		ND	ug/L	1.0	1	1	07/30/13	07/31/13 06:20
Ethylbenzene		ND	ug/L	1.0	1	1	07/30/13	07/31/13 06:20
m,p-Xylenes		ND	ug/L	2.0	1	1	07/30/13	07/31/13 06:20
Styrene		ND	ug/L	1.0	1	1	07/30/13	07/31/13 06:20
1,1,2,2-Tetrachloroethane		ND	ug/L	1.0	1	1	07/30/13	07/31/13 06:20
o-Xylene		ND	ug/L	1.0	1	1	07/30/13	07/31/13 06:20
Isopropylbenzene		ND	ug/L	1.0	1	1	07/30/13	07/31/13 06:20
1,3-Dichlorobenzene		ND	ug/L	1.0	1	1	07/30/13	07/31/13 06:20
1,4-Dichlorobenzene		ND	ug/L	1.0	1	1	07/30/13	07/31/13 06:20
1,2-Dichlorobenzene		ND	ug/L	1.0	1	1	07/30/13	07/31/13 06:20
1,2-Dibromo-3-Chloropropane		ND	ug/L	10	1	1	07/30/13	07/31/13 06:20
1,2,4-Trichlorobenzene		ND	ug/L	1.0	1	1	07/30/13	07/31/13 06:20
Naphthalene		ND	ug/L	1.0	1	1	07/30/13	07/31/13 06:20
1,2,3-Trichlorobenzene		ND	ug/L	1.0	1	1	07/30/13	07/31/13 06:20

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## CERTIFICATE OF ANALYSIS

No: 13072314, 13072429, 13072601, 13072911, 13080206

**Whitman, Requardt & Associates, LLP., Fairfax, VA**

August 12, 2013

Project Name: Central Ave.

Project Location: Baltimore, MD

Project ID: 31576-007

<b>Sample ID: CAESB-11</b>		<b>Date/Time Sampled: 07/29/2013 09:00</b>				<b>PSS Sample ID: 13072911-001</b>		
<b>Matrix: GROUND WATER</b>		<b>Date/Time Received: 07/29/2013 13:21</b>						
TCL Semivolatile Organic Compounds		Analytical Method: SW-846 8270 C				Preparation Method: 3510C		
		<b>Result</b>	<b>Units</b>	<b>RL</b>	<b>Flag</b>	<b>Dil</b>	<b>Prepared</b>	<b>Analyzed</b>
Acenaphthene		ND	ug/L	5.0	1	1	07/30/13	07/30/13 19:00
Acenaphthylene		ND	ug/L	5.0	1	1	07/30/13	07/30/13 19:00
Acetophenone		ND	ug/L	5.0	1	1	07/30/13	07/30/13 19:00
Anthracene		ND	ug/L	5.0	1	1	07/30/13	07/30/13 19:00
Caprolactam		ND	ug/L	5.0	1	1	07/30/13	07/30/13 19:00
Biphenyl (Diphenyl)		ND	ug/L	5.0	1	1	07/30/13	07/30/13 19:00
Atrazine		ND	ug/L	5.0	1	1	07/30/13	07/30/13 19:00
Benzo(a)anthracene		ND	ug/L	5.0	1	1	07/30/13	07/30/13 19:00
Benzo(a)pyrene		ND	ug/L	5.0	1	1	07/30/13	07/30/13 19:00
Benzo(b)fluoranthene		ND	ug/L	5.0	1	1	07/30/13	07/30/13 19:00
Benzo(g,h,i)perylene		ND	ug/L	5.0	1	1	07/30/13	07/30/13 19:00
Benzo(k)fluoranthene		ND	ug/L	5.0	1	1	07/30/13	07/30/13 19:00
Butyl benzyl phthalate		ND	ug/L	5.0	1	1	07/30/13	07/30/13 19:00
bis(2-chloroethoxy) methane		ND	ug/L	5.0	1	1	07/30/13	07/30/13 19:00
bis(2-chloroethyl) ether		ND	ug/L	5.0	1	1	07/30/13	07/30/13 19:00
bis(2-chloroisopropyl) ether		ND	ug/L	5.0	1	1	07/30/13	07/30/13 19:00
bis(2-ethylhexyl) phthalate		ND	ug/L	5.0	1	1	07/30/13	07/30/13 19:00
4-Bromophenylphenyl ether		ND	ug/L	5.0	1	1	07/30/13	07/30/13 19:00
Di-n-butyl phthalate		ND	ug/L	5.0	1	1	07/30/13	07/30/13 19:00
Carbazole		ND	ug/L	5.0	1	1	07/30/13	07/30/13 19:00
4-Chloro-3-methyl phenol		ND	ug/L	5.0	1	1	07/30/13	07/30/13 19:00
4-Chloroaniline		ND	ug/L	10	1	1	07/30/13	07/30/13 19:00
2-Chloronaphthalene		ND	ug/L	5.0	1	1	07/30/13	07/30/13 19:00
2-Chlorophenol		ND	ug/L	5.0	1	1	07/30/13	07/30/13 19:00
4-Chlorophenyl Phenyl ether		ND	ug/L	5.0	1	1	07/30/13	07/30/13 19:00
Chrysene		ND	ug/L	5.0	1	1	07/30/13	07/30/13 19:00
Dibenz(a,h)Anthracene		ND	ug/L	5.0	1	1	07/30/13	07/30/13 19:00
Dibenzofuran		ND	ug/L	5.0	1	1	07/30/13	07/30/13 19:00
3,3-Dichlorobenzidine		ND	ug/L	5.0	1	1	07/30/13	07/30/13 19:00
2,4-Dichlorophenol		ND	ug/L	5.0	1	1	07/30/13	07/30/13 19:00

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 13072314, 13072429, 13072601, 13072911, 13080206

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August 12, 2013

Project Name: Central Ave.

Project Location: Baltimore, MD

Project ID: 31576-007

<b>Sample ID: CAESB-11</b>		<b>Date/Time Sampled: 07/29/2013 09:00</b>				<b>PSS Sample ID: 13072911-001</b>		
<b>Matrix: GROUND WATER</b>		<b>Date/Time Received: 07/29/2013 13:21</b>						
TCL Semivolatile Organic Compounds		Analytical Method: SW-846 8270 C				Preparation Method: 3510C		
		<b>Result</b>	<b>Units</b>	<b>RL</b>	<b>Flag</b>	<b>Dil</b>	<b>Prepared</b>	<b>Analyzed</b>
Diethyl phthalate		ND	ug/L	5.0	1	1	07/30/13	07/30/13 19:00
Dimethyl phthalate		ND	ug/L	5.0	1	1	07/30/13	07/30/13 19:00
2,4-Dimethylphenol		ND	ug/L	5.0	1	1	07/30/13	07/30/13 19:00
4,6-Dinitro-2-methyl phenol		ND	ug/L	5.0	1	1	07/30/13	07/30/13 19:00
2,4-Dinitrophenol		ND	ug/L	10	1	1	07/30/13	07/30/13 19:00
2,4-Dinitrotoluene		ND	ug/L	5.0	1	1	07/30/13	07/30/13 19:00
2,6-Dinitrotoluene		ND	ug/L	5.0	1	1	07/30/13	07/30/13 19:00
Fluoranthene		ND	ug/L	5.0	1	1	07/30/13	07/30/13 19:00
Fluorene		ND	ug/L	5.0	1	1	07/30/13	07/30/13 19:00
Hexachlorobenzene		ND	ug/L	5.0	1	1	07/30/13	07/30/13 19:00
Hexachlorobutadiene		ND	ug/L	5.0	1	1	07/30/13	07/30/13 19:00
Hexachlorocyclopentadiene		ND	ug/L	5.0	1	1	07/30/13	07/30/13 19:00
Hexachloroethane		ND	ug/L	5.0	1	1	07/30/13	07/30/13 19:00
Indeno(1,2,3-c,d)Pyrene		ND	ug/L	5.0	1	1	07/30/13	07/30/13 19:00
Isophorone		ND	ug/L	5.0	1	1	07/30/13	07/30/13 19:00
2-Methylnaphthalene		ND	ug/L	5.0	1	1	07/30/13	07/30/13 19:00
2-Methyl phenol		ND	ug/L	5.0	1	1	07/30/13	07/30/13 19:00
3&4-Methylphenol		ND	ug/L	5.0	1	1	07/30/13	07/30/13 19:00
Naphthalene		ND	ug/L	5.0	1	1	07/30/13	07/30/13 19:00
4-Nitroaniline		ND	ug/L	10	1	1	07/30/13	07/30/13 19:00
3-Nitroaniline		ND	ug/L	5.0	1	1	07/30/13	07/30/13 19:00
2-Nitroaniline		ND	ug/L	5.0	1	1	07/30/13	07/30/13 19:00
Nitrobenzene		ND	ug/L	5.0	1	1	07/30/13	07/30/13 19:00
2-Nitrophenol		ND	ug/L	5.0	1	1	07/30/13	07/30/13 19:00
4-Nitrophenol		ND	ug/L	5.0	1	1	07/30/13	07/30/13 19:00
N-Nitrosodi-n-propyl amine		ND	ug/L	5.0	1	1	07/30/13	07/30/13 19:00
N-Nitrosodiphenylamine		ND	ug/L	5.0	1	1	07/30/13	07/30/13 19:00
Di-n-octyl phthalate		ND	ug/L	10	1	1	07/30/13	07/30/13 19:00
Pentachlorophenol		ND	ug/L	10	1	1	07/30/13	07/30/13 19:00
Phenanthrene		ND	ug/L	5.0	1	1	07/30/13	07/30/13 19:00

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## CERTIFICATE OF ANALYSIS

No: 13072314, 13072429, 13072601, 13072911, 13080206

**Whitman, Requardt & Associates, LLP., Fairfax, VA**

August 12, 2013

Project Name: Central Ave.

Project Location: Baltimore, MD

Project ID: 31576-007

<b>Sample ID: CAESB-11</b>	<b>Date/Time Sampled: 07/29/2013 09:00 PSS Sample ID: 13072911-001</b>							
<b>Matrix: GROUND WATER</b>	<b>Date/Time Received: 07/29/2013 13:21</b>							
TCL Semivolatile Organic Compounds	Analytical Method: SW-846 8270 C				Preparation Method: 3510C			
	<b>Result</b>	<b>Units</b>	<b>RL</b>	<b>Flag</b>	<b>Dil</b>	<b>Prepared</b>	<b>Analyzed</b>	<b>Analyst</b>
Phenol	ND	ug/L	5.0	1		07/30/13	07/30/13 19:00	1014
Pyrene	ND	ug/L	5.0	1		07/30/13	07/30/13 19:00	1014
Pyridine	ND	ug/L	5.0	1		07/30/13	07/30/13 19:00	1014
2,4,6-Trichlorophenol	ND	ug/L	5.0	1		07/30/13	07/30/13 19:00	1014
2,4,5-Trichlorophenol	ND	ug/L	5.0	1		07/30/13	07/30/13 19:00	1014

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No: 13072314, 13072429, 13072601, 13072911, 13080206

**Whitman, Requardt & Associates, LLP., Fairfax, VA**

August 12, 2013

Project Name: Central Ave.

Project Location: Baltimore, MD

Project ID: 31576-007

<b>Sample ID: CAESB-9</b>	<b>Date/Time Sampled: 07/29/2013 11:00 PSS Sample ID: 13072911-002</b>							
<b>Matrix: GROUND WATER</b>	<b>Date/Time Received: 07/29/2013 13:21</b>							
Dissolved PP Metals	Analytical Method: SW-846 6020 A				Preparation Method: 3005A			
	<b>Result</b>	<b>Units</b>	<b>RL</b>	<b>Flag</b>	<b>Dil</b>	<b>Prepared</b>	<b>Analyzed</b>	<b>Analyst</b>
Antimony	ND	ug/L	5.0	1		08/02/13	08/02/13 15:20	1033
Arsenic	ND	ug/L	1.0	1		08/02/13	08/02/13 15:20	1033
Beryllium	ND	ug/L	1.0	1		08/02/13	08/02/13 15:20	1033
Cadmium	ND	ug/L	1.0	1		08/02/13	08/02/13 15:20	1033
Chromium	ND	ug/L	1.0	1		08/02/13	08/02/13 15:20	1033
Copper	ND	ug/L	1.0	1		08/02/13	08/02/13 15:20	1033
Lead	ND	ug/L	1.0	1		08/02/13	08/02/13 15:20	1033
Mercury	ND	ug/L	0.20	1		08/02/13	08/02/13 15:20	1033
Nickel	ND	ug/L	1.0	1		08/02/13	08/02/13 15:20	1033
Selenium	ND	ug/L	1.0	1		08/02/13	08/02/13 15:20	1033
Silver	ND	ug/L	1.0	1		08/02/13	08/02/13 15:20	1033
Thallium	ND	ug/L	1.0	1		08/02/13	08/02/13 15:20	1033
Zinc	ND	ug/L	20	1		08/02/13	08/02/13 15:20	1033
Total Petroleum Hydrocarbons - DRO	Analytical Method: SW-846 8015 C				Preparation Method: 3510C			
	<b>Result</b>	<b>Units</b>	<b>RL</b>	<b>Flag</b>	<b>Dil</b>	<b>Prepared</b>	<b>Analyzed</b>	<b>Analyst</b>
TPH-DRO (Diesel Range Organics)	0.15	mg/L	0.10	1		07/30/13	07/30/13 11:49	1040
Total Petroleum Hydrocarbons-GRO	Analytical Method: SW-846 8015C				Preparation Method: 5030B			
	<b>Result</b>	<b>Units</b>	<b>RL</b>	<b>Flag</b>	<b>Dil</b>	<b>Prepared</b>	<b>Analyzed</b>	<b>Analyst</b>
TPH-GRO (Gasoline Range Organics)	ND	ug/L	100	1		07/29/13	07/29/13 18:33	1035

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 13072314, 13072429, 13072601, 13072911, 13080206

**Whitman, Requardt & Associates, LLP., Fairfax, VA**

August 12, 2013

Project Name: Central Ave.

Project Location: Baltimore, MD

Project ID: 31576-007

Sample ID: CAESB-9	Date/Time Sampled: 07/29/2013 11:00 PSS Sample ID: 13072911-002					
Matrix: GROUND WATER	Date/Time Received: 07/29/2013 13:21					
TCL Volatile Organic Compounds	Analytical Method: SW-846 8260 B			Preparation Method: 5030B		
	Result	Units	RL	Flag	Dil	Prepared Analyzed Analyst
Dichlorodifluoromethane	ND	ug/L	1.0	1	1	07/30/13 07/31/13 06:49 1011
Chloromethane	ND	ug/L	1.0	1	1	07/30/13 07/31/13 06:49 1011
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	ug/L	1.0	1	1	07/30/13 07/31/13 06:49 1011
Vinyl Chloride	ND	ug/L	1.0	1	1	07/30/13 07/31/13 06:49 1011
Bromomethane	ND	ug/L	1.0	1	1	07/30/13 07/31/13 06:49 1011
Chloroethane	ND	ug/L	1.0	1	1	07/30/13 07/31/13 06:49 1011
Acetone	ND	ug/L	10	1	1	07/30/13 07/31/13 06:49 1011
Cyclohexane	ND	ug/L	10	1	1	07/30/13 07/31/13 06:49 1011
Trichlorofluoromethane	ND	ug/L	5.0	1	1	07/30/13 07/31/13 06:49 1011
1,1-Dichloroethene	ND	ug/L	1.0	1	1	07/30/13 07/31/13 06:49 1011
Methylene Chloride	ND	ug/L	1.0	1	1	07/30/13 07/31/13 06:49 1011
trans-1,2-Dichloroethene	ND	ug/L	1.0	1	1	07/30/13 07/31/13 06:49 1011
Methyl-t-butyl ether	2.7	ug/L	1.0	1	1	07/30/13 07/31/13 06:49 1011
1,1-Dichloroethane	ND	ug/L	1.0	1	1	07/30/13 07/31/13 06:49 1011
2-Butanone (MEK)	ND	ug/L	10	1	1	07/30/13 07/31/13 06:49 1011
cis-1,2-Dichloroethene	ND	ug/L	1.0	1	1	07/30/13 07/31/13 06:49 1011
Bromochloromethane	ND	ug/L	1.0	1	1	07/30/13 07/31/13 06:49 1011
Chloroform	ND	ug/L	1.0	1	1	07/30/13 07/31/13 06:49 1011
1,1,1-Trichloroethane	ND	ug/L	1.0	1	1	07/30/13 07/31/13 06:49 1011
1,2-Dichloroethane	ND	ug/L	1.0	1	1	07/30/13 07/31/13 06:49 1011
Carbon Tetrachloride	ND	ug/L	1.0	1	1	07/30/13 07/31/13 06:49 1011
Benzene	ND	ug/L	1.0	1	1	07/30/13 07/31/13 06:49 1011
1,2-Dichloropropane	ND	ug/L	1.0	1	1	07/30/13 07/31/13 06:49 1011
Methyl Acetate	ND	ug/L	10	1	1	07/30/13 07/31/13 06:49 1011
Methylcyclohexane	ND	ug/L	10	1	1	07/30/13 07/31/13 06:49 1011
Trichloroethene	ND	ug/L	1.0	1	1	07/30/13 07/31/13 06:49 1011
Carbon Disulfide	ND	ug/L	10	1	1	07/30/13 07/31/13 06:49 1011
Bromodichloromethane	ND	ug/L	1.0	1	1	07/30/13 07/31/13 06:49 1011
cis-1,3-Dichloropropene	ND	ug/L	1.0	1	1	07/30/13 07/31/13 06:49 1011
4-Methyl-2-Pantanone	ND	ug/L	5.0	1	1	07/30/13 07/31/13 06:49 1011

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 13072314, 13072429, 13072601, 13072911, 13080206

**Whitman, Requardt & Associates, LLP., Fairfax, VA**

August 12, 2013

Project Name: Central Ave.

Project Location: Baltimore, MD

Project ID: 31576-007

Sample ID: CAESB-9	Date/Time Sampled: 07/29/2013 11:00 PSS Sample ID: 13072911-002					
Matrix: GROUND WATER	Date/Time Received: 07/29/2013 13:21					
TCL Volatile Organic Compounds	Analytical Method: SW-846 8260 B			Preparation Method: 5030B		
	Result	Units	RL	Flag	Dil	Prepared Analyzed Analyst
trans-1,3-Dichloropropene	ND	ug/L	1.0	1	1	07/30/13 07/31/13 06:49 1011
1,1,2-Trichloroethane	ND	ug/L	1.0	1	1	07/30/13 07/31/13 06:49 1011
Toluene	ND	ug/L	1.0	1	1	07/30/13 07/31/13 06:49 1011
2-Hexanone	ND	ug/L	10	1	1	07/30/13 07/31/13 06:49 1011
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1	1	07/30/13 07/31/13 06:49 1011
Dibromochloromethane	ND	ug/L	1.0	1	1	07/30/13 07/31/13 06:49 1011
Bromoform	ND	ug/L	5.0	1	1	07/30/13 07/31/13 06:49 1011
Tetrachloroethene	ND	ug/L	1.0	1	1	07/30/13 07/31/13 06:49 1011
Chlorobenzene	ND	ug/L	1.0	1	1	07/30/13 07/31/13 06:49 1011
Ethylbenzene	ND	ug/L	1.0	1	1	07/30/13 07/31/13 06:49 1011
m,p-Xylenes	ND	ug/L	2.0	1	1	07/30/13 07/31/13 06:49 1011
Styrene	ND	ug/L	1.0	1	1	07/30/13 07/31/13 06:49 1011
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1	1	07/30/13 07/31/13 06:49 1011
o-Xylene	ND	ug/L	1.0	1	1	07/30/13 07/31/13 06:49 1011
Isopropylbenzene	ND	ug/L	1.0	1	1	07/30/13 07/31/13 06:49 1011
1,3-Dichlorobenzene	ND	ug/L	1.0	1	1	07/30/13 07/31/13 06:49 1011
1,4-Dichlorobenzene	ND	ug/L	1.0	1	1	07/30/13 07/31/13 06:49 1011
1,2-Dichlorobenzene	ND	ug/L	1.0	1	1	07/30/13 07/31/13 06:49 1011
1,2-Dibromo-3-Chloropropane	ND	ug/L	10	1	1	07/30/13 07/31/13 06:49 1011
1,2,4-Trichlorobenzene	ND	ug/L	1.0	1	1	07/30/13 07/31/13 06:49 1011
Naphthalene	ND	ug/L	1.0	1	1	07/30/13 07/31/13 06:49 1011
1,2,3-Trichlorobenzene	ND	ug/L	1.0	1	1	07/30/13 07/31/13 06:49 1011

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 13072314, 13072429, 13072601, 13072911, 13080206

**Whitman, Requardt & Associates, LLP., Fairfax, VA**

August 12, 2013

Project Name: Central Ave.

Project Location: Baltimore, MD

Project ID: 31576-007

<b>Sample ID: CAESB-9</b>		<b>Date/Time Sampled: 07/29/2013 11:00</b>				<b>PSS Sample ID: 13072911-002</b>		
<b>Matrix: GROUND WATER</b>		<b>Date/Time Received: 07/29/2013 13:21</b>						
TCL Semivolatile Organic Compounds		Analytical Method: SW-846 8270 C				Preparation Method: 3510C		
		<b>Result</b>	<b>Units</b>	<b>RL</b>	<b>Flag</b>	<b>Dil</b>	<b>Prepared</b>	<b>Analyzed</b>
Acenaphthene		ND	ug/L	5.0	1	1	07/30/13	07/30/13 19:29
Acenaphthylene		ND	ug/L	5.0	1	1	07/30/13	07/30/13 19:29
Acetophenone		ND	ug/L	5.0	1	1	07/30/13	07/30/13 19:29
Anthracene		ND	ug/L	5.0	1	1	07/30/13	07/30/13 19:29
Caprolactam		ND	ug/L	5.0	1	1	07/30/13	07/30/13 19:29
Biphenyl (Diphenyl)		ND	ug/L	5.0	1	1	07/30/13	07/30/13 19:29
Atrazine		ND	ug/L	5.0	1	1	07/30/13	07/30/13 19:29
Benzo(a)anthracene		ND	ug/L	5.0	1	1	07/30/13	07/30/13 19:29
Benzo(a)pyrene		ND	ug/L	5.0	1	1	07/30/13	07/30/13 19:29
Benzo(b)fluoranthene		ND	ug/L	5.0	1	1	07/30/13	07/30/13 19:29
Benzo(g,h,i)perylene		ND	ug/L	5.0	1	1	07/30/13	07/30/13 19:29
Benzo(k)fluoranthene		ND	ug/L	5.0	1	1	07/30/13	07/30/13 19:29
Butyl benzyl phthalate		ND	ug/L	5.0	1	1	07/30/13	07/30/13 19:29
bis(2-chloroethoxy) methane		ND	ug/L	5.0	1	1	07/30/13	07/30/13 19:29
bis(2-chloroethyl) ether		ND	ug/L	5.0	1	1	07/30/13	07/30/13 19:29
bis(2-chloroisopropyl) ether		ND	ug/L	5.0	1	1	07/30/13	07/30/13 19:29
bis(2-ethylhexyl) phthalate		ND	ug/L	5.0	1	1	07/30/13	07/30/13 19:29
4-Bromophenylphenyl ether		ND	ug/L	5.0	1	1	07/30/13	07/30/13 19:29
Di-n-butyl phthalate		ND	ug/L	5.0	1	1	07/30/13	07/30/13 19:29
Carbazole		ND	ug/L	5.0	1	1	07/30/13	07/30/13 19:29
4-Chloro-3-methyl phenol		ND	ug/L	5.0	1	1	07/30/13	07/30/13 19:29
4-Chloroaniline		ND	ug/L	10	1	1	07/30/13	07/30/13 19:29
2-Chloronaphthalene		ND	ug/L	5.0	1	1	07/30/13	07/30/13 19:29
2-Chlorophenol		ND	ug/L	5.0	1	1	07/30/13	07/30/13 19:29
4-Chlorophenyl Phenyl ether		ND	ug/L	5.0	1	1	07/30/13	07/30/13 19:29
Chrysene		ND	ug/L	5.0	1	1	07/30/13	07/30/13 19:29
Dibenz(a,h)Anthracene		ND	ug/L	5.0	1	1	07/30/13	07/30/13 19:29
Dibenzofuran		ND	ug/L	5.0	1	1	07/30/13	07/30/13 19:29
3,3-Dichlorobenzidine		ND	ug/L	5.0	1	1	07/30/13	07/30/13 19:29
2,4-Dichlorophenol		ND	ug/L	5.0	1	1	07/30/13	07/30/13 19:29

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 13072314, 13072429, 13072601, 13072911, 13080206

**Whitman, Requardt & Associates, LLP., Fairfax, VA**

August 12, 2013

Project Name: Central Ave.

Project Location: Baltimore, MD

Project ID: 31576-007

Sample ID: CAESB-9	Date/Time Sampled: 07/29/2013 11:00 PSS Sample ID: 13072911-002					
Matrix: GROUND WATER	Date/Time Received: 07/29/2013 13:21					
TCL Semivolatile Organic Compounds	Analytical Method: SW-846 8270 C			Preparation Method: 3510C		
	Result	Units	RL	Flag	Dil	Prepared Analyzed Analyst
Diethyl phthalate	ND	ug/L	5.0	1	1	07/30/13 07/30/13 19:29 1014
Dimethyl phthalate	ND	ug/L	5.0	1	1	07/30/13 07/30/13 19:29 1014
2,4-Dimethylphenol	ND	ug/L	5.0	1	1	07/30/13 07/30/13 19:29 1014
4,6-Dinitro-2-methyl phenol	ND	ug/L	5.0	1	1	07/30/13 07/30/13 19:29 1014
2,4-Dinitrophenol	ND	ug/L	10	1	1	07/30/13 07/30/13 19:29 1014
2,4-Dinitrotoluene	ND	ug/L	5.0	1	1	07/30/13 07/30/13 19:29 1014
2,6-Dinitrotoluene	ND	ug/L	5.0	1	1	07/30/13 07/30/13 19:29 1014
Fluoranthene	ND	ug/L	5.0	1	1	07/30/13 07/30/13 19:29 1014
Fluorene	ND	ug/L	5.0	1	1	07/30/13 07/30/13 19:29 1014
Hexachlorobenzene	ND	ug/L	5.0	1	1	07/30/13 07/30/13 19:29 1014
Hexachlorobutadiene	ND	ug/L	5.0	1	1	07/30/13 07/30/13 19:29 1014
Hexachlorocyclopentadiene	ND	ug/L	5.0	1	1	07/30/13 07/30/13 19:29 1014
Hexachloroethane	ND	ug/L	5.0	1	1	07/30/13 07/30/13 19:29 1014
Indeno(1,2,3-c,d)Pyrene	ND	ug/L	5.0	1	1	07/30/13 07/30/13 19:29 1014
Isophorone	ND	ug/L	5.0	1	1	07/30/13 07/30/13 19:29 1014
2-Methylnaphthalene	ND	ug/L	5.0	1	1	07/30/13 07/30/13 19:29 1014
2-Methyl phenol	ND	ug/L	5.0	1	1	07/30/13 07/30/13 19:29 1014
3&4-Methylphenol	ND	ug/L	5.0	1	1	07/30/13 07/30/13 19:29 1014
Naphthalene	ND	ug/L	5.0	1	1	07/30/13 07/30/13 19:29 1014
4-Nitroaniline	ND	ug/L	10	1	1	07/30/13 07/30/13 19:29 1014
3-Nitroaniline	ND	ug/L	5.0	1	1	07/30/13 07/30/13 19:29 1014
2-Nitroaniline	ND	ug/L	5.0	1	1	07/30/13 07/30/13 19:29 1014
Nitrobenzene	ND	ug/L	5.0	1	1	07/30/13 07/30/13 19:29 1014
2-Nitrophenol	ND	ug/L	5.0	1	1	07/30/13 07/30/13 19:29 1014
4-Nitrophenol	ND	ug/L	5.0	1	1	07/30/13 07/30/13 19:29 1014
N-Nitrosodi-n-propyl amine	ND	ug/L	5.0	1	1	07/30/13 07/30/13 19:29 1014
N-Nitrosodiphenylamine	ND	ug/L	5.0	1	1	07/30/13 07/30/13 19:29 1014
Di-n-octyl phthalate	ND	ug/L	10	1	1	07/30/13 07/30/13 19:29 1014
Pentachlorophenol	ND	ug/L	10	1	1	07/30/13 07/30/13 19:29 1014
Phenanthrene	ND	ug/L	5.0	1	1	07/30/13 07/30/13 19:29 1014

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 13072314, 13072429, 13072601, 13072911, 13080206

**Whitman, Requardt & Associates, LLP., Fairfax, VA**

August 12, 2013

Project Name: Central Ave.

Project Location: Baltimore, MD

Project ID: 31576-007

<b>Sample ID: CAESB-9</b>	<b>Date/Time Sampled: 07/29/2013 11:00 PSS Sample ID: 13072911-002</b>							
<b>Matrix: GROUND WATER</b>	<b>Date/Time Received: 07/29/2013 13:21</b>							

TCL Semivolatile Organic Compounds	Analytical Method: SW-846 8270 C				Preparation Method: 3510C			
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	<b>Result</b>	<b>Units</b>	<b>RL</b>	<b>Flag</b>	<b>Dil</b>	<b>Prepared</b>	<b>Analyzed</b>	<b>Analyst</b>
Phenol	ND	ug/L	5.0	1		07/30/13	07/30/13 19:29	1014
Pyrene	ND	ug/L	5.0	1		07/30/13	07/30/13 19:29	1014
Pyridine	ND	ug/L	5.0	1		07/30/13	07/30/13 19:29	1014
2,4,6-Trichlorophenol	ND	ug/L	5.0	1		07/30/13	07/30/13 19:29	1014
2,4,5-Trichlorophenol	ND	ug/L	5.0	1		07/30/13	07/30/13 19:29	1014

<b>Sample ID: CAESB-11</b>	<b>Date/Time Sampled: 07/29/2013 09:00 PSS Sample ID: 13080206-001</b>							
<b>Matrix: GROUND WATER</b>	<b>Date/Time Received: 07/29/2013 13:21</b>							

PP Metals	Analytical Method: SW-846 6020 A				Preparation Method: 3010A			
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	<b>Result</b>	<b>Units</b>	<b>RL</b>	<b>Flag</b>	<b>Dil</b>	<b>Prepared</b>	<b>Analyzed</b>	<b>Analyst</b>
Antimony	ND	ug/L	5.0	1		08/05/13	08/05/13 15:15	1034
Arsenic	<b>1.2</b>	ug/L	1.0	1		08/05/13	08/06/13 12:47	1034
Beryllium	ND	ug/L	1.0	1		08/05/13	08/05/13 15:15	1034
Cadmium	ND	ug/L	1.0	1		08/05/13	08/05/13 15:15	1034
Chromium	<b>4.5</b>	ug/L	1.0	1		08/05/13	08/05/13 15:15	1034
Copper	<b>2.3</b>	ug/L	1.0	1		08/05/13	08/05/13 15:15	1034
Lead	<b>2.3</b>	ug/L	1.0	1		08/05/13	08/05/13 15:15	1034
Mercury	ND	ug/L	0.20	1		08/05/13	08/05/13 15:15	1034
Nickel	<b>2.0</b>	ug/L	1.0	1		08/05/13	08/05/13 15:15	1034
Selenium	ND	ug/L	1.0	1		08/05/13	08/05/13 15:15	1034
Silver	ND	ug/L	1.0	1		08/05/13	08/05/13 15:15	1034
Thallium	ND	ug/L	1.0	1		08/05/13	08/05/13 15:15	1034
Zinc	ND	ug/L	20	1		08/05/13	08/05/13 15:15	1034

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# **PHASE SEPARATION SCIENCE, INC.**



## CERTIFICATE OF ANALYSIS

No: 13072314, 13072429, 13072601, 13072911, 13080206

**Whitman, Requardt & Associates, LLP., Fairfax, VA**

August 12, 2013

Project Name: Central Ave.

Project Location: Baltimore, MD

Project ID: 31576-007

<b>Sample ID: CAESB-9</b>	<b>Date/Time Sampled: 07/29/2013 11:00 PSS Sample ID: 13080206-002</b>							
<b>Matrix: GROUND WATER</b>	<b>Date/Time Received: 07/29/2013 13:21</b>							
PP Metals	Analytical Method: SW-846 6020 A				Preparation Method: 3010A			
	<b>Result</b>	<b>Units</b>	<b>RL</b>	<b>Flag</b>	<b>Dil</b>	<b>Prepared</b>	<b>Analyzed</b>	<b>Analyst</b>
Antimony	ND	ug/L	5.0	1		08/05/13	08/05/13 15:21	1034
Arsenic	ND	ug/L	1.0	1		08/05/13	08/05/13 15:21	1034
Beryllium	ND	ug/L	1.0	1		08/05/13	08/05/13 15:21	1034
Cadmium	ND	ug/L	1.0	1		08/05/13	08/05/13 15:21	1034
Chromium	ND	ug/L	1.0	1		08/05/13	08/05/13 15:21	1034
Copper	ND	ug/L	1.0	1		08/05/13	08/05/13 15:21	1034
Lead	<b>14</b>	ug/L	1.0	1		08/05/13	08/05/13 15:21	1034
Mercury	ND	ug/L	0.20	1		08/05/13	08/05/13 15:21	1034
Nickel	ND	ug/L	1.0	1		08/05/13	08/05/13 15:21	1034
Selenium	ND	ug/L	1.0	1		08/05/13	08/05/13 15:21	1034
Silver	ND	ug/L	1.0	1		08/05/13	08/05/13 15:21	1034
Thallium	ND	ug/L	1.0	1		08/05/13	08/05/13 15:21	1034
Zinc	ND	ug/L	20	1		08/05/13	08/05/13 15:21	1034



# SAMPLE CHAIN OF CUSTODY/AGREEMENT FORM

## PHASE SEPARATION SCIENCE, INC.

[www.phaseonline.com](http://www.phaseonline.com)  
email: [info@phaseonline.com](mailto:info@phaseonline.com)

① \*CLIENT: Whitman, Requardt \*OFFICE LOC. Fairfax, VA

\*PROJECT MGR: Kevin T. Rank \*PHONE NO.: (703) 293-7432

EMAIL: [kroberts@wrrlp.com](mailto:kroberts@wrrlp.com) FAX NO.: ( )

\*PROJECT NAME: Central Ave.

PROJECT NO.: 31576-00

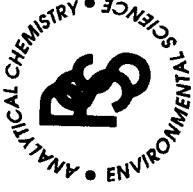
SITE LOCATION: Baltimore, MD

P.O. NO.:

SAMPLER(S): KTR

DW CERT NO.:

		PSS Work Order #: 130723/4		PAGE 1 OF 2												
		Matrix Codes: SW=Surface Wtr DW=Drinking Wtr GW=Ground Wtr WW=Waste Wtr O=Oil S=Soil L=Liquid SOL=Solid A=Air WI=Wipe														
LAB NO.	*SAMPLE IDENTIFICATION	*DATE (SAMPLED)	*TIME (SAMPLED)	MATRIX (See Codes)	REMARKS											
						C	O	N	T	A	G	Preservatives Used	Analyst/ Method Required	C = COMP ③ *	G = GRAB R	
1	CAESB-2 8-10'	7/22	12:20	S	2	G	✓	✓	✓	✓	✓					
2	CAESB-2 2-10'	7/22	12:20	S	1	C										
3	CAESB-2 10-20	7/22	12:20	S	1	C										
4	CAESB-3 8-10'	7/22	15:00	S	2	G	✓	✓	✓	✓	✓					
5	CAESB-3 2-10'	7/22	15:00	S	1	C										
6	CAESB-3 10-20'	7/22	15:00	S	1	C										
7	CAESB-2 7/23 8:30	GW	13	G	✓	✓	✓	✓	✓	✓	✓					
8	CAESB-6 2-10'	7/23	15:00	S	1	C										
9	CAESB-6 10-20'	7/23	15:00	S	1	C										
10	CAESB-6 8-10'	7/23	15:00	S	2	G	✓	✓	✓	✓	✓					
⑤	Relinquished By: (1) <i>Kevin Rank</i>	Date: 7/23	Time: 15:30	Received By: <i>J. A. H.</i>	1640	④	*Requested TAT (One TAT per COC) 5-Day <input type="checkbox"/> 3-Day <input type="checkbox"/> 2-Day <input type="checkbox"/> Next Day <input type="checkbox"/> Emergency <input type="checkbox"/> Other <input type="checkbox"/>	# of Coolers: 1								
⑥	Relinquished By: (2) <i>Kevin Rank</i>	Date: 7/23	Time: 15:30	Received By: <i>J. A. H.</i>	1640	④	Data Deliverables Required: COA QC SUMM CLP LIKE OTHER <input type="checkbox"/> <input type="checkbox"/>	GSS Temp: 11°C	GSS Shipping Carrier: <i>UPS</i>							
⑦	Relinquished By: (3) <i>Kevin Rank</i>	Date: 7/23	Time: 15:30	Received By: <i>J. A. H.</i>	1640	④	Special Instructions: Please hold GW filter unpressured & w.									
⑧	Relinquished By: (4) <i>Kevin Rank</i>	Date: 7/23	Time: 15:30	Received By: <i>J. A. H.</i>	1640	④	DW COMPLIANCE? YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	EDD FORMAT TYPE MD <input type="checkbox"/> DE <input type="checkbox"/> PA <input type="checkbox"/> VA <input type="checkbox"/> WV <input type="checkbox"/> OTHER <input type="checkbox"/>	STATE RESULTS REPORTED TO:							



# SAMPLE CHAIN OF CUSTODY/AGREEMENT FORM

## PHASE SEPARATION SCIENCE, INC.

[www.phaseonline.com](http://www.phaseonline.com)  
email: [info@phaseonline.com](mailto:info@phaseonline.com)

<b>1</b> *CLIENT: <i>unipac, Regent &amp; Assoc</i> *OFFICE LOC. <i>Fairfax, VA</i>				PSS Work Order #: <b>13072314</b>				PAGE <b>2</b> OF <b>2</b>	
*PROJECT MGR: <i>Karin T Roberts</i> *PHONE NO.: <i>(703) 293 - 7432</i> EMAIL: <i>Kroberts@wmlp.com</i> FAX NO.: <i>( )</i> *PROJECT NAME: <i>Central Ave.</i> SITE LOCATION: <i>Baltimore, MD</i>				Matrix Codes: SW=Surface Wtr DW=Drinking Wtr GW=Ground Wtr WW=Waste Wtr O=Oil S=Soil L=liquid A=Air W=Wipe					
DW CERT NO.: <b>2</b> LAB NO. *SAMPLE IDENTIFICATION *DATE (SAMPLED) *TIME (SAMPLED) MATRIX (See Codes) 11 CAESB-3 7/23 15:30 GW				Preservatives Used C SAMPLE TYPE O N T A C = COMP N I E R S G = GRAB * ③				REMARKS <i>Please hold tank metals.</i>	
<b>4</b> *Requested TAT (One TAT per COC) <input type="checkbox"/> 5-Day <input type="checkbox"/> 3-Day <input type="checkbox"/> Next Day <input type="checkbox"/> 2-Day <input type="checkbox"/> Emergency <input type="checkbox"/> Other Data Deliverables Required: COA QC SUMM CLP LIKE OTHER <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>									
Relinquished By: (1) <i>[Signature]</i> Date <b>7/23</b> Time <b>16:40</b> Received By: <i>[Signature]</i> Relinquished By: (2) Date _____ Time _____ Received By: _____ Relinquished By: (3) Date _____ Time _____ Received By: _____ Relinquished By: (4) Date _____ Time _____ Received By: _____									
								STATE RESULTS REPORTED TO: MD DE PA VA WV OTHER <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	

6630 Baltimore National Pike • Route 40 West • Baltimore, Maryland 21228 • (410) 747-8770 • (800) 932-9047 • Fax (410) 788-8723  
 The client (Client Name), by signing, or having client's agent sign, this "Sample Chain of Custody/Agreement Form", agrees to pay for the above requested services per the latest version of the Service Brochure or PSS-provided quotation including any and all attorney's or other reasonable fees if collection becomes necessary. \* = REQUIRED



# SAMPLE CHAIN OF CUSTODY/AGREEMENT FORM

## PHASE SEPARATION SCIENCE, INC.

www.phaseonline.com  
email: info@phaseonline.com

① *CLIENT: <u>Wintman, Reynolds &amp; Associates, Inc.</u> *OFFICE LOC. <u>Fairfax, VA</u>										PSS Work Order #: <u>13072429</u>	PAGE <u>1</u> OF _____	
*PROJECT MGR: <u>Kevin T. Roberts</u> *PHONE NO.: <u>(703) 243-7432</u>										Matrix Codes: <u>SW=Surface Wtr DW=Drinking Wtr GW=Ground Wtr WW=Waste Wtr O=Oil S=Soil L=Liquid SL=Solid A=Air WI=Wipe</u>		
EMAIL: <u>KRoberts@wra.org.com</u> FAX NO.: <u>( )</u>												
*PROJECT NAME: <u>Central Ave</u>										PROJECT NO.: <u>31576-007</u>		
SITE LOCATION: <u>Baltimore, MD</u>										P.O. NO.: <u></u>		
SAMPLER(S): <u>KTR</u>										DW CERT NO.: <u></u>		
②	LAB NO.			*SAMPLE IDENTIFICATION			*DATE (SAMPLED)	*TIME (SAMPLED)	MATRIX (See Codes)	REMARKS		
	<u>1 CAESB-6</u>			<u>7/24</u>			<u>9:30</u>	<u>GW</u>	<u>9</u>	<u>-Hold Total metals</u>		
	<u>2 CAESB-SA 2-10'</u>			<u>7/24</u>			<u>13:00</u>	<u>S</u>	<u>1</u>	<u>-Lab F: Iter Dissolve</u>		
	<u>3 CAESB-SA 10-20'</u>			<u>7/24</u>			<u>13:00</u>	<u>S</u>	<u>1</u>	<u></u>		
	<u>4 CAESB - SA - 6-8'</u>			<u>7/24</u>			<u>13:00</u>	<u>S</u>	<u>2</u>	<u></u>		
	<u>5 CAESB - 7 2-10'</u>			<u>7/24</u>			<u>15:30</u>	<u>S</u>	<u>1</u>	<u></u>		
	<u>6 CAESB - 7 10-20'</u>			<u>7/24</u>			<u>15:30</u>	<u>S</u>	<u>1</u>	<u></u>		
	<u>7 CAESB - 7 6 - 8</u>			<u>7/24</u>			<u>15:30</u>	<u>S</u>	<u>2</u>	<u></u>		
③										④		
⑤ Relinquished By: (1) <u>Kevin T. Roberts</u> Date <u>7/24</u> Time <u>16:20</u>										Received By: <u>Robby Murphy</u>	# of Coolers: <u>1</u>	
Relinquished By: (2)										Received By:	Custody Seal: <u>Abis</u>	
Relinquished By: (3)										Received By:	Temp: <u>40 C</u>	
Relinquished By: (4)										Received By:	Ice Present: <u>Yes</u>	
										Shipping Carrier: <u>Chees</u>		
										Special Instructions: <u>- Hold Total Metals (GW)</u> <u>- Lab F: Iter Dissolved (GW)</u>		
										DW COMPLIANCE? YES <input type="checkbox"/>	EDD FORMAT TYPE	STATE RESULTS REPORTED TO:
										<input type="checkbox"/>	<input type="checkbox"/> MD <input type="checkbox"/> DE <input type="checkbox"/> PA <input type="checkbox"/> VA <input type="checkbox"/> WV <input type="checkbox"/> OTHER	



## **SAMPLE CHAIN OF CUSTODY/AGREEMENT FORM**

# PHASE SEPARATION SCIENCE, INC.

[www.phaseonline.com](http://www.phaseonline.com)  
email: [info@phaseonline.com](mailto:info@phaseonline.com)

PSS Work Order #: <u>3072601</u>		PAGE <u>1</u> OF <u>1</u>		
CLIENT: Whitman, Requardt & Assoc. * OFFICE LOC. Fairfax, VA		Matrix Codes:		
*PROJECT MGR: Kevin T. Roberts * PHONE NO.: (703) 293-7432		SW-Surface Wtr DW=Drinking Wtr GW=Ground Wtr WW=Waste Wtr O=Oil S=Soil L=liquid SOL=Solid A=Air WI=Wipe		
EMAIL: KRoberts@wrrap.com FAX NO.: ( )		No. C SAMPLE Preservatives Used Analysis/ Method Required		
*PROJECT NAME: Central Ave.		T N C = COMP		
SITE LOCATION: Baltimore, MD		A I G = GRAB		
SAMPLER(S): <u>K72</u>		E R S		
DW CERT NO.:		REMARKS - Hold Total metals - Lab Filter dissolved		
LAB NO.	*SAMPLE IDENTIFICATION	*DATE (SAMPLED)	*TIME (SAMPLED)	MATRIX (See Codes)
1	CAESB-7	7/25	9:05	GW
2	CAESB-5A	7/25	10:30	GW
3	CAESB-11 4-6'	7/25	14:20	S
4	CAESB-11 2-16'	7/25	14:20	S
5	CAESB-11 6-20'	7/25	14:20	S
6	CAESB-9 C-8'	7/25	11:30	S
7	CAESB-9 2-10'	7/25	17:30	S
8	CAESB-9 10-20'	7/25	17:30	S
KR	7/26 CAESB-9	7/26	17:30	SOL
KR	7/26 CAESB-11	7/26	17:30	SOL
5	Relinquished By: (1) <u>Kevin T. Roberts</u>	Date <u>7/26</u>	Time <u>8:10</u>	Received By: <u>John Hanley</u>
Relinquished By: (2)	Date	Time	Received By:	
Relinquished By: (3)	Date	Time	Received By:	
Relinquished By: (4)	Date	Time	Received By:	
DW COMPLIANCE? YES <input type="checkbox"/>	EDD FORMAT TYPE?	STATE RESULTS REPORTED TO: MD <input type="checkbox"/> DE <input type="checkbox"/> PA <input type="checkbox"/> VA <input type="checkbox"/> WV <input type="checkbox"/> OTHER <input type="checkbox"/>		
Special Instructions: - Hold GW Total Metals - Lab Filter dissolved metals (GW)		# of Coolers: <u>1</u> Requested TAT (One TAT per COC) <input checked="" type="checkbox"/> 5-Day <input type="checkbox"/> 3-Day <input type="checkbox"/> Next Day <input type="checkbox"/> Emergency <input type="checkbox"/> Other Data Deliverables Required: COA QC SUMM CLP LIKE OTHER <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Custody Seal: <u>N/A</u> Ice Present: <u>yes</u> Temp: <u>70C</u> Shipping Carrier: <u>UPS</u>		

**66630 Baltimore National Pike • Route 40 West • Baltimore, Maryland 21228 • (410) 747-8770 • (800) 932-9047 • Fax (410) 788-8723**  
The client (Client Name), by signing, or having client's agent sign, this "Sample Chain of Custody/Agreement Form", agrees to pay for the above requested services per the latest version of the Service Brochure or PSS-provided quotation including any and all attorney's or other reasonable fees if collection becomes necessary. \* = REQUIRED



# SAMPLE CHAIN OF CUSTODY/AGREEMENT FORM

## PHASE SEPARATION SCIENCE, INC.

www.phaseonline.com  
email: info@phaseonline.com

1 *CLIENT: <u>Whitman, Kevin T. Roberts</u> , *OFFICE LOC. <u>Fairfax, VA</u>										PSS Work Order #: <u>13072911</u>		PAGE <u>1</u> OF <u>1</u>	
Matrix Codes: SW=Surface Wtr DW=Drinking Wtr GW=Ground Wtr MW=Waste Wtr O=Oil S=Soil L=liquid SOL=Solid A=Air WI=Wire													
No. C SAMPLE Preservatives Used Analysis Method Required O N T A N R S													
C = COMP ③ G = GRAB *													
Hold Total metals Lab filter class 5 (Co-5)													
PP Metals 6026 PP Metals 8270 SVOCs 8260 VOCs 8015 THI-TRC THI-HF													
DW CERT NO.:  7/29 9:00 SW 7/29 11:00 SW													
*SAMPLE IDENTIFICATION *DATE (SAMPLED) *TIME (SAMPLED) MATRIX (See Codes) CAESB-11 CAESB-9													
LAB NO.  K-TK													
4 *Requested TAT (One TAT per COC) # of Coolers: <u>1</u> 5-Day <input type="checkbox"/> 3-Day <input type="checkbox"/> 2-Day <input type="checkbox"/> Next Day <input type="checkbox"/> Emergency <input type="checkbox"/> Other <input type="checkbox"/> Data Deliverables Required: COA QC SUMM CLP LIKE OTHER <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>													
5 Relinquished By: (1) <u>Kevin T. Roberts</u> Date: <u>7/29</u> Time: <u>13:00</u> Received By: <u>Roger Phillips</u> Relinquished By: (2) Date: <u></u> Time: <u></u> Received By: <u></u> Relinquished By: (3) Date: <u></u> Time: <u></u> Received By: <u></u> Relinquished By: (4) Date: <u></u> Time: <u></u> Received By: <u></u>													
DW COMPLIANCE? EDD FORMAT TYPE YES <input type="checkbox"/> STATE RESULTS REPORTED TO: MD <input type="checkbox"/> DE <input type="checkbox"/> PA <input type="checkbox"/> VA <input type="checkbox"/> WI <input type="checkbox"/> OTHER													

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# SAMPLE CHAIN OF CUSTODY/AGREEMENT FORM

## PHASE SEPARATION SCIENCE, INC.

[www.phaseonline.com](http://www.phaseonline.com)  
email: [Info@phaseonline.com](mailto:Info@phaseonline.com)

<b>1</b> *CLIENT: <u>Whitman, Berg &amp; Bernstein</u> , *OFFICE LOC. <u>Fairfax, VA</u> *PROJECT MGR: <u>Kevin T. Rands</u> *PHONE NO.: <u>(703) 293 - 7432</u> EMAIL: <u>Krroberts@wbb.com</u> FAX NO.: <u>( )</u> *PROJECT NAME: <u>Central Ave.</u> PROJECT NO.: <u>34576-007</u> SITE LOCATION: <u>Baltimore, MD</u> P.O. NO.: SAMPLER(S): <u>K-TR</u>										PAGE	1	OF	1																																																																																								
<b>2</b> *SAMPLE IDENTIFICATION <table border="1"> <tr> <td>No.</td> <td>*DATE (SAMPLED)</td> <td>*TIME (SAMPLED)</td> <td>MATRIX (See Codes)</td> <td>Preservatives Used</td> <td>Method Required</td> <td>C = COMP</td> <td>G = GRAB</td> <td colspan="3">REMARKS</td> </tr> <tr> <td>C</td> <td>7/29</td> <td>9:00</td> <td>GW</td> <td>q</td> <td>GW</td> <td>③</td> <td>*</td> <td colspan="3">Hold total metals Lab filter dissolved metals (Gw)</td> </tr> <tr> <td>O</td> <td>7/29</td> <td>11:00</td> <td>GW</td> <td>q</td> <td>GW</td> <td></td> <td></td> <td colspan="3"></td> </tr> <tr> <td>N</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td colspan="3"></td> </tr> <tr> <td>T</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td colspan="3"></td> </tr> <tr> <td>A</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td colspan="3"></td> </tr> <tr> <td>R</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td colspan="3"></td> </tr> <tr> <td>S</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td colspan="3"></td> </tr> </table>										No.	*DATE (SAMPLED)	*TIME (SAMPLED)	MATRIX (See Codes)	Preservatives Used	Method Required	C = COMP	G = GRAB	REMARKS			C	7/29	9:00	GW	q	GW	③	*	Hold total metals Lab filter dissolved metals (Gw)			O	7/29	11:00	GW	q	GW						N											T											A											R											S														
No.	*DATE (SAMPLED)	*TIME (SAMPLED)	MATRIX (See Codes)	Preservatives Used	Method Required	C = COMP	G = GRAB	REMARKS																																																																																													
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<b>4</b> DW COMPLIANCE? YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> PAGE <u>1</u> OF <u>1</u>																																																																																																					
<b>5</b> *Requested TAT (One TAT per COC) <input type="checkbox"/> 5-Day <input type="checkbox"/> 2-Day <input type="checkbox"/> Next Day <input type="checkbox"/> Emergency Data Deliverables Required: COA QC SUMM CLP LIKE OTHER <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>																																																																																																					
<b>6</b> Relinquished By: (1) <u>Kevin T. Rands</u> Date <u>7/29</u> Time <u>13:00</u> Received By: <u>Bob Berg</u> Date <u>7/29</u> Time <u>13:30</u> Relinquished By: (2) _____ Date _____ Time _____ Received By: _____ Date _____ Time _____ Relinquished By: (3) _____ Date _____ Time _____ Received By: _____ Date _____ Time _____ Relinquished By: (4) _____ Date _____ Time _____ Received By: _____ Date _____ Time _____										STATE RESULTS REPORTED TO: <input type="checkbox"/> MD <input type="checkbox"/> DE <input type="checkbox"/> PA <input type="checkbox"/> VA <input type="checkbox"/> WV OTHER																																																																																											

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# Phase Separation Science, Inc

## Sample Receipt Checklist

Work Order #	13072314	Received By	Rachel Davis
Client Name	Whitman, Requardt & Associates, LL	Date Received	07/23/2013 04:40:00 PM
Project Name	Central Ave.	Delivered By	Client
Project Number	31576-007	Tracking No	Not Applicable
Disposal Date	08/27/2013	Logged In By	Rachel Davis

### Shipping Container(s)

No. of Coolers	1	Ice	Present
Custody Seal(s) Intact?	N/A	Temp (deg C)	11
Seal(s) Signed / Dated?	N/A	Temp Blank Present	No

### Documentation

COC agrees with sample labels?	Yes	Sampler Name	<u>Kevin Roberts</u>
Chain of Custody	Yes	MD DW Cert. No.	<u>N/A</u>

### Sample Container

Appropriate for Specified Analysis?	Yes	Custody Seal(s) Intact?	Not Applicable
Intact?	Yes	Seal(s) Signed / Dated	Not Applicable
Labeled and Labels Legible?	Yes		

Total No. of Samples Received 11

Total No. of Containers Received 34

### Preservation

Metals	(pH<2)	Yes
Cyanides	(pH>12)	N/A
Sulfide	(pH>9)	N/A
TOC, COD, Phenols	(ph<2)	N/A
TOX, TKN, NH3, Total Phos	(pH<2)	N/A
VOC, BTEX (VOA Vials Rcvd Preserved)	(pH<2)	Yes
Do VOA vials have zero headspace?		Yes

### Comments: (Any "No" response must be detailed in the comments section below.)

For any improper preservation conditions, list sample ID, preservative added (reagent ID number) below as well as documentation of any client notification as well as client instructions. Samples for pH, chlorine and dissolved oxygen should be analyzed as soon as possible, preferably in the field at the time of sampling. Samples which require thermal preservation shall be considered acceptable when received at a temperature above freezing to 6°C. Samples that are hand delivered on the day that they are collected may not meet these criteria but shall be considered acceptable if there is evidence that the chilling process has begun such as arrival on ice.

Sample(s) received at a temperature greater than 6 degrees C and ice was present.

Samples Inspected/Checklist Completed By:

*Robyn Rhudy*

Robyn Rhudy

Date: 08/02/2013

PM Review and Approval:

*Amy Friedlander*

Amy Friedlander

Date: 08/02/2013



# Phase Separation Science, Inc

## Sample Receipt Checklist

Work Order #	13072429	Received By	Robyn Rhudy
Client Name	Whitman, Requardt & Associates, LL	Date Received	07/24/2013 04:26:00 PM
Project Name	Central Ave	Delivered By	Client
Project Number	31576-007	Tracking No	Not Applicable
Disposal Date	08/28/2013	Logged In By	Robyn Rhudy

### Shipping Container(s)

No. of Coolers	1	Ice	Present
Custody Seal(s) Intact?	N/A	Temp (deg C)	4
Seal(s) Signed / Dated?	N/A	Temp Blank Present	No

### Documentation

COC agrees with sample labels?	Yes	Sampler Name	<u>Not Provided</u>
Chain of Custody	Yes		<u>N/A</u>

### Sample Container

Appropriate for Specified Analysis?	Yes	Custody Seal(s) Intact?	Not Applicable
Intact?	Yes	Seal(s) Signed / Dated	Not Applicable
Labeled and Labels Legible?	Yes		

Total No. of Samples Received 7

Total No. of Containers Received 17

### Preservation

Metals	(pH<2)	N/A
Cyanides	(pH>12)	N/A
Sulfide	(pH>9)	N/A
TOC, COD, Phenols	(ph<2)	N/A
TOX, TKN, NH3, Total Phos	(pH<2)	N/A
VOC, BTEX (VOA Vials Rcvd Preserved)	(pH<2)	Yes
Do VOA vials have zero headspace?		Yes

### Comments: (Any "No" response must be detailed in the comments section below.)

For any improper preservation conditions, list sample ID, preservative added (reagent ID number) below as well as documentation of any client notification as well as client instructions. Samples for pH, chlorine and dissolved oxygen should be analyzed as soon as possible, preferably in the field at the time of sampling. Samples which require thermal preservation shall be considered acceptable when received at a temperature above freezing to 6°C. Samples that are hand delivered on the day that they are collected may not meet these criteria but shall be considered acceptable if there is evidence that the chilling process has begun such as arrival on ice.

Samples Inspected/Checklist Completed By:

*Robyn Rhudy*

Robyn Rhudy

Date: 08/02/2013

PM Review and Approval:

*Amy Friedlander*

Amy Friedlander

Date: 08/02/2013



# Phase Separation Science, Inc

## Sample Receipt Checklist

<b>Work Order #</b>	13072601	<b>Received By</b>	Amy Friedlander
<b>Client Name</b>	Whitman, Requardt & Associates, LL	<b>Date Received</b>	07/26/2013 08:10:00 AM
<b>Project Name</b>	Central Ave.	<b>Delivered By</b>	Client
<b>Project Number</b>	31576-007	<b>Tracking No</b>	Not Applicable
<b>Disposal Date</b>	08/30/2013	<b>Logged In By</b>	Robyn Rhudy

### Shipping Container(s)

No. of Coolers	1	Ice	Present
Custody Seal(s) Intact?	N/A	Temp (deg C)	3
Seal(s) Signed / Dated?	N/A	Temp Blank Present	No

### Documentation

COC agrees with sample labels?	Yes	Sampler Name	<u>Kevin Roberts</u>
Chain of Custody	Yes	MD DW Cert. No.	<u>N/A</u>

### Sample Container

Appropriate for Specified Analysis?	Yes	Custody Seal(s) Intact?	Not Applicable
Intact?	Yes	Seal(s) Signed / Dated	Not Applicable
Labeled and Labels Legible?	Yes		

Total No. of Samples Received 9

Total No. of Containers Received 28

### Preservation

Metals	(pH<2)	Yes
Cyanides	(pH>12)	N/A
Sulfide	(pH>9)	N/A
TOC, COD, Phenols	(ph<2)	N/A
TOX, TKN, NH3, Total Phos	(pH<2)	N/A
VOC, BTEX (VOA Vials Rcvd Preserved)	(pH<2)	Yes
Do VOA vials have zero headspace?		Yes

### Comments: (Any "No" response must be detailed in the comments section below.)

For any improper preservation conditions, list sample ID, preservative added (reagent ID number) below as well as documentation of any client notification as well as client instructions. Samples for pH, chlorine and dissolved oxygen should be analyzed as soon as possible, preferably in the field at the time of sampling. Samples which require thermal preservation shall be considered acceptable when received at a temperature above freezing to 6°C. Samples that are hand delivered on the day that they are collected may not meet these criteria but shall be considered acceptable if there is evidence that the chilling process has begun such as arrival on ice.

Received two soil jars with sample identification of CAESB-11 6-8' not on the COC. Date and time obtained from container label. Placed on hold per client.

Samples Inspected/Checklist Completed By:

\_\_\_\_\_  
Robyn Rhudy

Date: 08/02/2013

PM Review and Approval:

\_\_\_\_\_  
Amy Friedlander

Date: 08/02/2013



# Phase Separation Science, Inc

## Sample Receipt Checklist

Work Order #	13072911	Received By	Robyn Rhudy
Client Name	Whitman, Requardt & Associates, LL	Date Received	07/29/2013 01:21:00 PM
Project Name	Central Ave.	Delivered By	Client
Project Number	31576-007	Tracking No	Not Applicable
Disposal Date	09/02/2013	Logged In By	Robyn Rhudy

### Shipping Container(s)

No. of Coolers	1	Ice	Present
Custody Seal(s) Intact?	N/A	Temp (deg C)	1
Seal(s) Signed / Dated?	N/A	Temp Blank Present	No

### Documentation

COC agrees with sample labels?	Yes	Sampler Name	<u>Kevin Roberts</u>
Chain of Custody	Yes	MD DW Cert. No.	<u>N/A</u>

### Sample Container

Appropriate for Specified Analysis?	Yes	Custody Seal(s) Intact?	Not Applicable
Intact?	Yes	Seal(s) Signed / Dated	Not Applicable
Labeled and Labels Legible?	Yes		

Total No. of Samples Received 2

Total No. of Containers Received 18

### Preservation

Metals	(pH<2)	Yes
Cyanides	(pH>12)	N/A
Sulfide	(pH>9)	N/A
TOC, COD, Phenols	(ph<2)	N/A
TOX, TKN, NH3, Total Phos	(pH<2)	N/A
VOC, BTEX (VOA Vials Rcvd Preserved)	(pH<2)	Yes
Do VOA vials have zero headspace?		Yes

### Comments: (Any "No" response must be detailed in the comments section below.)

For any improper preservation conditions, list sample ID, preservative added (reagent ID number) below as well as documentation of any client notification as well as client instructions. Samples for pH, chlorine and dissolved oxygen should be analyzed as soon as possible, preferably in the field at the time of sampling. Samples which require thermal preservation shall be considered acceptable when received at a temperature above freezing to 6°C. Samples that are hand delivered on the day that they are collected may not meet these criteria but shall be considered acceptable if there is evidence that the chilling process has begun such as arrival on ice.

Samples Inspected/Checklist Completed By:

*Robyn Rhudy*

\_\_\_\_\_  
Robyn Rhudy

Date: 08/02/2013

PM Review and Approval:

*Amy Friedlander*

\_\_\_\_\_  
Amy Friedlander

Date: 08/02/2013



# Phase Separation Science, Inc

## Sample Receipt Checklist

<b>Work Order #</b>	13080206	<b>Received By</b>	Robyn Rhudy
<b>Client Name</b>	Whitman, Requardt & Associates, LL	<b>Date Received</b>	07/29/2013 01:21:00 PM
<b>Project Name</b>	Central Ave.	<b>Delivered By</b>	Client
<b>Project Number</b>	31576-007	<b>Tracking No</b>	Not Applicable
<b>Disposal Date</b>	09/02/2013	<b>Logged In By</b>	Robyn Rhudy

### Shipping Container(s)

No. of Coolers	1	Ice	Present
Custody Seal(s) Intact?	N/A	Temp (deg C)	1
Seal(s) Signed / Dated?	N/A	Temp Blank Present	No

### Documentation

COC agrees with sample labels?	Yes	Sampler Name	<u>Kevin Roberts</u>
Chain of Custody	Yes	MD DW Cert. No.	<u>N/A</u>

### Sample Container

Appropriate for Specified Analysis?	Yes	Custody Seal(s) Intact?	Not Applicable
Intact?	Yes	Seal(s) Signed / Dated	Not Applicable
Labeled and Labels Legible?	Yes		

Total No. of Samples Received 2

Total No. of Containers Received 2

### Preservation

Metals	(pH<2)	Yes
Cyanides	(pH>12)	N/A
Sulfide	(pH>9)	N/A
TOC, COD, Phenols	(ph<2)	N/A
TOX, TKN, NH3, Total Phos	(pH<2)	N/A
VOC, BTEX (VOA Vials Rcvd Preserved)	(pH<2)	N/A
Do VOA vials have zero headspace?		N/A

### Comments: (Any "No" response must be detailed in the comments section below.)

For any improper preservation conditions, list sample ID, preservative added (reagent ID number) below as well as documentation of any client notification as well as client instructions. Samples for pH, chlorine and dissolved oxygen should be analyzed as soon as possible, preferably in the field at the time of sampling. Samples which require thermal preservation shall be considered acceptable when received at a temperature above freezing to 6°C. Samples that are hand delivered on the day that they are collected may not meet these criteria but shall be considered acceptable if there is evidence that the chilling process has begun such as arrival on ice.

Refer to previous Work Order 13072911.

Samples Inspected/Checklist Completed By:

*Robyn Rhudy*

Robyn Rhudy

Date: 08/02/2013

PM Review and Approval:

*Amy Friedlander*

Amy Friedlander

Date: 08/02/2013

# Analytical Report for

## Whitman, Requardt & Associates, LLP.

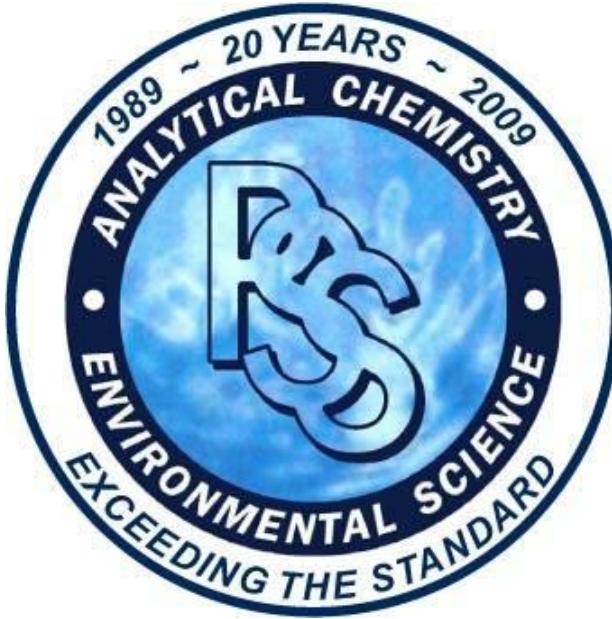
**Certificate of Analysis No(s).:**  
**13081208, 13081209, 13081210**

**Project Manager: Kevin Roberts**

**Project Name : Central Ave.**

**Project Location: Baltimore, MD**

**Project ID : 31576-007**



**August 16, 2013**  
**Phase Separation Science, Inc.**  
**6630 Baltimore National Pike**  
**Baltimore, MD 21228**  
**Phone: (410) 747-8770**  
**Fax: (410) 788-8723**

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# PHASE SEPARATION SCIENCE, INC.



August 16, 2013

**Kevin Roberts**  
**Whitman, Requardt & Associates, LLP.**  
3701 Pender Drive, Suite 450  
Fairfax, VA 22030

Reference: PSS Work Order(s) No: **13081208, 13081209, 13081210**

Project Name: Central Ave.  
Project Location: Baltimore, MD  
Project ID.: 31576-007

Dear Kevin Roberts :

This report includes the analytical results from the analyses performed on the samples received under the project name referenced above and identified with the Phase Separation Science (PSS) Work Order(s) numbered **13081208, 13081209, 13081210**.

All work reported herein has been performed in accordance with current NELAP standards, referenced methodologies, PSS Standard Operating Procedures and the PSS Quality Assurance Manual unless otherwise noted in the Case Narrative Summary. PSS is limited in liability to the actual cost of the sample analysis done.

PSS reserves the right to return any unused samples, extracts or related solutions. Otherwise, the samples are scheduled for disposal, without any further notice, on August 28, 2013. This includes any samples that were received with a request to be held but lacked a specific hold period. It is your responsibility to provide a written request defining a specific disposal date if additional storage is required. Upon receipt , the request will be acknowledged by PSS, thus extending the storage period.

This report shall not be reproduced except in full, without the written approval of an authorized PSS representative. A copy of this report will be retained by PSS for at least 5 years, after which time it will be disposed of without further notice, unless prior arrangements have been made.

We thank you for selecting Phase Separation Science, Inc. to serve your analytical needs. If you have any questions concerning this report, do not hesitate to contact us at 410-747-8770 or info@phaseonline.com.

Sincerely,

**Dan Prucnal**

Laboratory Manager



## Sample Summary

**Client Name: Whitman, Requardt & Associates, LLP.**

**Project Name: Central Ave.**

**Work Order Number(s): 13081208, 13081209, 13081210**

**Project ID: 31576-007**

The following samples were received under chain of custody by Phase Separation Science (PSS):

Lab Sample Id	Sample Id	Matrix	Date/Time Collected	Date/Time Received
13081208-001	CAESB-7	GROUND WATER	07/25/13 09:00	07/26/13 08:10
13081208-002	CAESB-5A	GROUND WATER	07/25/13 10:30	07/26/13 08:10
13081209-001	CAESB-2	GROUND WATER	07/23/13 08:30	07/23/13 16:40
13081209-002	CAESB-3	GROUND WATER	07/23/13 15:30	07/23/13 16:40
13081210-001	CAESB-6	GROUND WATER	07/24/13 09:00	07/24/13 16:26

Please reference the Chain of Custody and Sample Receipt Checklist for specific container counts and preservatives. Any sample conditions not in compliance with sample acceptance criteria are described in Case Narrative Summary.

Notes:

1. The presence of a common laboratory contaminant such as methylene chloride may be considered a possible laboratory artifact. Where observed, appropriate consideration of data should be taken.
2. The following analytical results are never reported on a dry weight basis: pH, flashpoint, moisture and paint filter test.
3. Drinking water samples collected for the purpose of compliance with SDWA may not be suitable for their intended use unless collected by a certified sampler [COMAR 26.08.05.07.C.2].
4. The analyses of 1,2-dibromo-3-chloropropane (DBCP) and 1,2-dibromoethane (EDB) by EPA 524.2 and calcium, magnesium, sodium and iron by EPA 200.8 are not currently promulgated for use in testing to meet the Safe Drinking Water Act and as such cannot be used for compliance purposes. The listings of the current promulgated methods for testing in compliance with the Safe Drinking Water Act can be found in the 40 CFR part 141.1, for the primary drinking water contaminants, and part 141.3, for the secondary drinking water contaminants.
5. The analyses of chlorine, pH, dissolved oxygen, temperature and sulfite for non-potable water samples tested for compliance for Virginia Pollution Discharge Elimination System (VPDES) permits and Virginia Pollutant Abatement (VPA) permits, have a maximum holding time of 15 minutes established by 40CFR136.3.

### Standard Flags/Abbreviations:

B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.

C Results Pending Final Confirmation.

E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.

Fail The result exceeds the regulatory level for Toxicity Characteristic (TCLP) as cited in 40 CFR 261.24 Table 1.

J The target analyte was positively identified below the reporting limit but greater than the LOD.

LOD Limit of Detection. An estimate of the minimum amount of a substance that an analytical process can reliably detect. An LOD is analyte and matrix specific.

ND Not Detected at or above the reporting limit.

RL PSS Reporting Limit.

U Not detected.



## Case Narrative Summary

**Client Name: Whitman, Requardt & Associates, LLP.**

**Project Name: Central Ave.**

Work Order Number(s): 13081208, 13081209, 13081210

Project ID: 31576-007

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Any holding time exceedances, deviations from the method specifications, regulatory requirements or variations to the procedures outlined in the PSS Quality Assurance Manual are outlined below.

**Sample Receipt:**

13081208: Refer to previous Work Order 13072601-001 and -002, previously on hold.

**Sample Receipt:**

13081209: Refer to previous Work Order 13072314-007 and -011, previously on hold.

**Sample Receipt:**

13081210: Refer to previous Work Order 13072429-001, previously on hold.

**NELAP accreditation was held for all analyses performed unless noted below. See [www.phaseonline.com](http://www.phaseonline.com) for complete PSS scope of accreditation.**

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**FAX 410-788-8723**

# **PHASE SEPARATION SCIENCE, INC.**



## CERTIFICATE OF ANALYSIS

No: 13081208, 13081209, 13081210

**Whitman, Requardt & Associates, LLP., Fairfax, VA**

August 16, 2013

Project Name: Central Ave.

Project Location: Baltimore, MD

Project ID: 31576-007

<b>Sample ID: CAESB-7</b>	<b>Date/Time Sampled: 07/25/2013 09:00 PSS Sample ID: 13081208-001</b>							
<b>Matrix: GROUND WATER</b>	<b>Date/Time Received: 07/26/2013 08:10</b>							
PP Metals	Analytical Method: SW-846 6020 A				Preparation Method: 3010A			
	<b>Result</b>	<b>Units</b>	<b>RL</b>	<b>Flag</b>	<b>Dil</b>	<b>Prepared</b>	<b>Analyzed</b>	<b>Analyst</b>
Antimony	ND	ug/L	5.0	1		08/13/13	08/14/13 12:41	1034
Arsenic	<b>1.8</b>	ug/L	1.0	1		08/13/13	08/13/13 15:46	1034
Beryllium	ND	ug/L	1.0	1		08/13/13	08/14/13 12:41	1034
Cadmium	ND	ug/L	1.0	1		08/13/13	08/13/13 15:46	1034
Chromium	<b>5.9</b>	ug/L	1.0	1		08/13/13	08/13/13 15:46	1034
Copper	<b>5.3</b>	ug/L	1.0	1		08/13/13	08/13/13 15:46	1034
Lead	<b>7.9</b>	ug/L	1.0	1		08/13/13	08/13/13 15:46	1034
Mercury	ND	ug/L	0.20	1		08/13/13	08/13/13 15:46	1034
Nickel	<b>3.5</b>	ug/L	1.0	1		08/13/13	08/13/13 15:46	1034
Selenium	ND	ug/L	1.0	1		08/13/13	08/13/13 15:46	1034
Silver	ND	ug/L	1.0	1		08/13/13	08/13/13 15:46	1034
Thallium	ND	ug/L	1.0	1		08/13/13	08/13/13 15:46	1034
Zinc	ND	ug/L	20	1		08/13/13	08/13/13 15:46	1034

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# **PHASE SEPARATION SCIENCE, INC.**



## CERTIFICATE OF ANALYSIS

No: 13081208, 13081209, 13081210

**Whitman, Requardt & Associates, LLP., Fairfax, VA**

August 16, 2013

Project Name: Central Ave.

Project Location: Baltimore, MD

Project ID: 31576-007

<b>Sample ID: CAESB-5A</b>	<b>Date/Time Sampled: 07/25/2013 10:30 PSS Sample ID: 13081208-002</b>							
<b>Matrix: GROUND WATER</b>	<b>Date/Time Received: 07/26/2013 08:10</b>							
PP Metals	Analytical Method: SW-846 6020 A				Preparation Method: 3010A			
	<b>Result</b>	<b>Units</b>	<b>RL</b>	<b>Flag</b>	<b>Dil</b>	<b>Prepared</b>	<b>Analyzed</b>	<b>Analyst</b>
Antimony	ND	ug/L	5.0	1		08/13/13	08/14/13 12:47	1034
Arsenic	<b>2.8</b>	ug/L	1.0	1		08/13/13	08/13/13 15:52	1034
Beryllium	ND	ug/L	1.0	1		08/13/13	08/14/13 12:47	1034
Cadmium	ND	ug/L	1.0	1		08/13/13	08/13/13 15:52	1034
Chromium	<b>30</b>	ug/L	1.0	1		08/13/13	08/13/13 15:52	1034
Copper	<b>17</b>	ug/L	1.0	1		08/13/13	08/13/13 15:52	1034
Lead	<b>18</b>	ug/L	1.0	1		08/13/13	08/13/13 15:52	1034
Mercury	ND	ug/L	0.20	1		08/13/13	08/13/13 15:52	1034
Nickel	<b>14</b>	ug/L	1.0	1		08/13/13	08/13/13 15:52	1034
Selenium	<b>1.4</b>	ug/L	1.0	1		08/13/13	08/13/13 15:52	1034
Silver	ND	ug/L	1.0	1		08/13/13	08/13/13 15:52	1034
Thallium	ND	ug/L	1.0	1		08/13/13	08/13/13 15:52	1034
Zinc	<b>47</b>	ug/L	20	1		08/13/13	08/13/13 15:52	1034

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# **PHASE SEPARATION SCIENCE, INC.**



## CERTIFICATE OF ANALYSIS

No: 13081208, 13081209, 13081210

**Whitman, Requardt & Associates, LLP., Fairfax, VA**

August 16, 2013

Project Name: Central Ave.

Project Location: Baltimore, MD

Project ID: 31576-007

<b>Sample ID: CAESB-2</b>	<b>Date/Time Sampled: 07/23/2013 08:30 PSS Sample ID: 13081209-001</b>							
<b>Matrix: GROUND WATER</b>	<b>Date/Time Received: 07/23/2013 16:40</b>							
PP Metals	Analytical Method: SW-846 6020 A				Preparation Method: 3010A			
	<b>Result</b>	<b>Units</b>	<b>RL</b>	<b>Flag</b>	<b>Dil</b>	<b>Prepared</b>	<b>Analyzed</b>	<b>Analyst</b>
Antimony	ND	ug/L	5.0	1		08/13/13	08/14/13 12:53	1034
Arsenic	<b>1.5</b>	ug/L	1.0	1		08/13/13	08/13/13 15:58	1034
Beryllium	ND	ug/L	1.0	1		08/13/13	08/14/13 12:53	1034
Cadmium	ND	ug/L	1.0	1		08/13/13	08/13/13 15:58	1034
Chromium	<b>4.4</b>	ug/L	1.0	1		08/13/13	08/13/13 15:58	1034
Copper	<b>3.2</b>	ug/L	1.0	1		08/13/13	08/13/13 15:58	1034
Lead	<b>6.4</b>	ug/L	1.0	1		08/13/13	08/13/13 15:58	1034
Mercury	ND	ug/L	0.20	1		08/13/13	08/13/13 15:58	1034
Nickel	<b>6.4</b>	ug/L	1.0	1		08/13/13	08/13/13 15:58	1034
Selenium	ND	ug/L	1.0	1		08/13/13	08/13/13 15:58	1034
Silver	ND	ug/L	1.0	1		08/13/13	08/13/13 15:58	1034
Thallium	ND	ug/L	1.0	1		08/13/13	08/13/13 15:58	1034
Zinc	ND	ug/L	20	1		08/13/13	08/13/13 15:58	1034

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# **PHASE SEPARATION SCIENCE, INC.**



## CERTIFICATE OF ANALYSIS

No: 13081208, 13081209, 13081210

**Whitman, Requardt & Associates, LLP., Fairfax, VA**

August 16, 2013

Project Name: Central Ave.

Project Location: Baltimore, MD

Project ID: 31576-007

<b>Sample ID: CAESB-3</b>	<b>Date/Time Sampled: 07/23/2013 15:30 PSS Sample ID: 13081209-002</b>							
<b>Matrix: GROUND WATER</b>	<b>Date/Time Received: 07/23/2013 16:40</b>							
PP Metals	Analytical Method: SW-846 6020 A				Preparation Method: 3010A			
	<b>Result</b>	<b>Units</b>	<b>RL</b>	<b>Flag</b>	<b>Dil</b>	<b>Prepared</b>	<b>Analyzed</b>	<b>Analyst</b>
Antimony	ND	ug/L	5.0	1		08/13/13	08/14/13 12:59	1034
Arsenic	<b>2.4</b>	ug/L	1.0	1		08/13/13	08/13/13 16:04	1034
Beryllium	<b>1.8</b>	ug/L	1.0	1		08/13/13	08/14/13 12:59	1034
Cadmium	ND	ug/L	1.0	1		08/13/13	08/13/13 16:04	1034
Chromium	<b>52</b>	ug/L	1.0	1		08/13/13	08/13/13 16:04	1034
Copper	<b>24</b>	ug/L	1.0	1		08/13/13	08/13/13 16:04	1034
Lead	<b>13</b>	ug/L	1.0	1		08/13/13	08/13/13 16:04	1034
Mercury	ND	ug/L	0.20	1		08/13/13	08/13/13 16:04	1034
Nickel	<b>34</b>	ug/L	1.0	1		08/13/13	08/13/13 16:04	1034
Selenium	ND	ug/L	1.0	1		08/13/13	08/13/13 16:04	1034
Silver	ND	ug/L	1.0	1		08/13/13	08/13/13 16:04	1034
Thallium	ND	ug/L	1.0	1		08/13/13	08/13/13 16:04	1034
Zinc	<b>45</b>	ug/L	20	1		08/13/13	08/13/13 16:04	1034

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# **PHASE SEPARATION SCIENCE, INC.**



## CERTIFICATE OF ANALYSIS

No: 13081208, 13081209, 13081210

**Whitman, Requardt & Associates, LLP., Fairfax, VA**

August 16, 2013

Project Name: Central Ave.

Project Location: Baltimore, MD

Project ID: 31576-007

<b>Sample ID: CAESB-6</b>	<b>Date/Time Sampled: 07/24/2013 09:00 PSS Sample ID: 13081210-001</b>						
<b>Matrix: GROUND WATER</b>	<b>Date/Time Received: 07/24/2013 16:26</b>						
PP Metals	Analytical Method: SW-846 6020 A			Preparation Method: 3010A			
	<b>Result</b>	<b>Units</b>	<b>RL</b>	<b>Flag</b>	<b>Dil</b>	<b>Prepared</b>	<b>Analyzed</b>
Antimony	ND	ug/L	5.0	1	1	08/13/13	08/14/13 13:06
Arsenic	<b>7.0</b>	ug/L	1.0	1	1	08/13/13	08/13/13 16:10
Beryllium	ND	ug/L	1.0	1	1	08/13/13	08/14/13 13:06
Cadmium	ND	ug/L	1.0	1	1	08/13/13	08/13/13 16:10
Chromium	<b>9.6</b>	ug/L	1.0	1	1	08/13/13	08/13/13 16:10
Copper	<b>8.1</b>	ug/L	1.0	1	1	08/13/13	08/13/13 16:10
Lead	<b>34</b>	ug/L	1.0	1	1	08/13/13	08/13/13 16:10
Mercury	ND	ug/L	0.20	1	1	08/13/13	08/13/13 16:10
Nickel	<b>4.6</b>	ug/L	1.0	1	1	08/13/13	08/13/13 16:10
Selenium	ND	ug/L	1.0	1	1	08/13/13	08/13/13 16:10
Silver	ND	ug/L	1.0	1	1	08/13/13	08/13/13 16:10
Thallium	ND	ug/L	1.0	1	1	08/13/13	08/13/13 16:10
Zinc	<b>20</b>	ug/L	20	1	1	08/13/13	08/13/13 16:10



# SAMPLE CHAIN OF CUSTODY/AGREEMENT FORM

## PHASE SEPARATION SCIENCE, INC.

13081208

[www.phaseonline.com](http://www.phaseonline.com)  
email: [info@phaseonline.com](mailto:info@phaseonline.com)

<b>1</b> *CLIENT: William, Regan & Assoc. *OFFICE LOC. Fairfax, VA <b>*PROJECT MGR:</b> Ken T. Roberts *PHONE NO.: (703) 293-7432 <b>EMAIL:</b> <a href="mailto:KRoberts@wrrllp.com">KRoberts@wrrllp.com</a> FAX NO.: ( )										PAGE 1 OF 1																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
<b>2</b> *PROJECT NAME: Coward Ave. <b>SITE LOCATION:</b> Baltimore, MD <b>SAMPLER(S):</b> 1/72																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
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**PHASE SEPARATION SCIENCE, INC.**

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6630 Baltimore National Pike • Route 40 West • Baltimore, Maryland 21228 • (410) 747-8770 • (800) 932-9047 • Fax (410) 788-8723  
 The client (Client Name), by signing, or having client's agent sign, this "Sample Chain of Custody/Agreement Form", agrees to pay for the above requested services per the latest version of the Service Brochure or PSS-provided quotation including any and all attorney's or other reasonable fees if collection becomes necessary. \* = REQUIRED

## **SAMPLE CHAIN OF CUSTODY/AGREEMENT FORM**



## PHASE SEPARATION SCIENCE, INC.

13681/2-09

**www.phaseonline.com**  
**email: Info@phaseonline.com**

1 *CLIENT: <i>Karin T. Roberts</i> , Payment & Assoc. *OFFICE LOC. Fairfax, VA *PROJECT MGR: Karin T. Roberts *PHONE NO.: (703) 293 - 1432 EMAIL: <i>KRoberts@wmlp.com</i> FAX NO.: ( )										PAGE 2 OF 2																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
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**6630 Baltimore National Pike • Route 40 West • Baltimore, Maryland 21228 • (410) 747-8770 • (800) 932-9047 • Fax (410) 788-8723**

The client (Client Name), by signing, or having client's agent sign, this "Sample Chain of Custody/Agreement Form", agrees to pay for the above requested services per the latest version of the Service Brochure or PSS-provided quotation including any and all attorney's or other reasonable fees if collection becomes necessary. \* = REQUIRED



## **SAMPLE CHAIN OF CUSTODY/AGREEMENT FORM**

# PHASE SEPARATION SCIENCE, INC.

**www.phaseonline.com**  
**email: info@phaseonline.com**

13087210

**6630 Baltimore National Pike • Route 40 West • Baltimore, Maryland 21228 • (410) 747-8770 • (800) 932-9047 • Fax (410) 788-8723**  
The client (Client Name), by signing, or having client's agent sign, this "Sample Chain of Custody/Agreement Form", agrees to pay for the above requested services per the latest version of the Service Brochure or PSC-provided quotation including any and all attorney's or other reasonable fees if collection becomes necessary. \* = REQUIRED



# Phase Separation Science, Inc

## Sample Receipt Checklist

Work Order #	13081208	Received By	Amy Friedlander
Client Name	Whitman, Requardt & Associates, LL	Date Received	07/26/2013 08:10:00 AM
Project Name	Central Ave.	Delivered By	Client
Project Number	31576-007	Tracking No	Not Applicable
Disposal Date	08/30/2013	Logged In By	Robyn Rhudy

### Shipping Container(s)

No. of Coolers	1	Ice	Present
Custody Seal(s) Intact?	N/A	Temp (deg C)	3
Seal(s) Signed / Dated?	N/A	Temp Blank Present	No

### Documentation

COC agrees with sample labels?	N/A	Sampler Name	<u>Not Provided</u>
Chain of Custody	N/A		<u>N/A</u>

### Sample Container

Appropriate for Specified Analysis?	N/A	Custody Seal(s) Intact?	Not Applicable
Intact?	N/A	Seal(s) Signed / Dated	Not Applicable
Labeled and Labels Legible?	N/A		

Total No. of Samples Received 2

Total No. of Containers Received 2

### Preservation

Metals	(pH<2)	N/A
Cyanides	(pH>12)	N/A
Sulfide	(pH>9)	N/A
TOC, COD, Phenols	(ph<2)	N/A
TOX, TKN, NH3, Total Phos	(pH<2)	N/A
VOC, BTEX (VOA Vials Rcvd Preserved)	(pH<2)	N/A
Do VOA vials have zero headspace?		N/A

### Comments: (Any "No" response must be detailed in the comments section below.)

For any improper preservation conditions, list sample ID, preservative added (reagent ID number) below as well as documentation of any client notification as well as client instructions. Samples for pH, chlorine and dissolved oxygen should be analyzed as soon as possible, preferably in the field at the time of sampling. Samples which require thermal preservation shall be considered acceptable when received at a temperature above freezing to 6°C. Samples that are hand delivered on the day that they are collected may not meet these criteria but shall be considered acceptable if there is evidence that the chilling process has begun such as arrival on ice.

Refer to previous Work Order 13072601-001 and -002, previously on hold.

Samples Inspected/Checklist Completed By:

*Robyn Rhudy*

\_\_\_\_\_  
Robyn Rhudy

Date: 08/12/2013

PM Review and Approval:

*Amy Friedlander*

\_\_\_\_\_  
Amy Friedlander

Date: 08/13/2013



# Phase Separation Science, Inc

## Sample Receipt Checklist

Work Order #	13081209	Received By	Rachel Davis
Client Name	Whitman, Requardt & Associates, LL	Date Received	07/23/2013 04:40:00 PM
Project Name	Central Ave.	Delivered By	Client
Project Number	31576-007	Tracking No	Not Applicable
Disposal Date	08/27/2013	Logged In By	Robyn Rhudy

### Shipping Container(s)

No. of Coolers	1	Ice	Present
Custody Seal(s) Intact?	N/A	Temp (deg C)	11
Seal(s) Signed / Dated?	N/A	Temp Blank Present	No

### Documentation

COC agrees with sample labels?	N/A	Sampler Name	<u>Not Provided</u>
Chain of Custody	N/A		<u>N/A</u>

### Sample Container

Appropriate for Specified Analysis?	N/A	Custody Seal(s) Intact?	Not Applicable
Intact?	N/A	Seal(s) Signed / Dated	Not Applicable
Labeled and Labels Legible?	N/A		

Total No. of Samples Received 2

Total No. of Containers Received 2

### Preservation

Metals	(pH<2)	N/A
Cyanides	(pH>12)	N/A
Sulfide	(pH>9)	N/A
TOC, COD, Phenols	(ph<2)	N/A
TOX, TKN, NH3, Total Phos	(pH<2)	N/A
VOC, BTEX (VOA Vials Rcvd Preserved)	(pH<2)	N/A
Do VOA vials have zero headspace?		N/A

### Comments: (Any "No" response must be detailed in the comments section below.)

For any improper preservation conditions, list sample ID, preservative added (reagent ID number) below as well as documentation of any client notification as well as client instructions. Samples for pH, chlorine and dissolved oxygen should be analyzed as soon as possible, preferably in the field at the time of sampling. Samples which require thermal preservation shall be considered acceptable when received at a temperature above freezing to 6°C. Samples that are hand delivered on the day that they are collected may not meet these criteria but shall be considered acceptable if there is evidence that the chilling process has begun such as arrival on ice.

Refer to previous Work Order 13072314-007 and -011, previously on hold.

Samples Inspected/Checklist Completed By:

*Robyn Rhudy*

Date: 08/12/2013

Robyn Rhudy

PM Review and Approval:

*Amy Friedlander*

Amy Friedlander

Date: 08/13/2013



# Phase Separation Science, Inc

## Sample Receipt Checklist

Work Order #	13081210	Received By	Robyn Rhudy
Client Name	Whitman, Requardt & Associates, LL	Date Received	07/24/2013 04:26:00 PM
Project Name	Central Ave.	Delivered By	Client
Project Number	31576-007	Tracking No	Not Applicable
Disposal Date	08/28/2013	Logged In By	Robyn Rhudy

### Shipping Container(s)

No. of Coolers	1	Ice	Present
Custody Seal(s) Intact?	N/A	Temp (deg C)	4
Seal(s) Signed / Dated?	N/A	Temp Blank Present	No

### Documentation

COC agrees with sample labels?	N/A	Sampler Name	<u>Not Provided</u>
Chain of Custody	N/A		<u>N/A</u>

### Sample Container

Appropriate for Specified Analysis?	N/A	Custody Seal(s) Intact?	Not Applicable
Intact?	N/A	Seal(s) Signed / Dated	Not Applicable
Labeled and Labels Legible?	N/A		

Total No. of Samples Received 1

Total No. of Containers Received 1

### Preservation

Metals	(pH<2)	N/A
Cyanides	(pH>12)	N/A
Sulfide	(pH>9)	N/A
TOC, COD, Phenols	(ph<2)	N/A
TOX, TKN, NH3, Total Phos	(pH<2)	N/A
VOC, BTEX (VOA Vials Rcvd Preserved)	(pH<2)	N/A
Do VOA vials have zero headspace?		N/A

### Comments: (Any "No" response must be detailed in the comments section below.)

For any improper preservation conditions, list sample ID, preservative added (reagent ID number) below as well as documentation of any client notification as well as client instructions. Samples for pH, chlorine and dissolved oxygen should be analyzed as soon as possible, preferably in the field at the time of sampling. Samples which require thermal preservation shall be considered acceptable when received at a temperature above freezing to 6°C. Samples that are hand delivered on the day that they are collected may not meet these criteria but shall be considered acceptable if there is evidence that the chilling process has begun such as arrival on ice.

Refer to previous Work Order 13072429-001, previously on hold.

Samples Inspected/Checklist Completed By:

*Robyn Rhudy*

Robyn Rhudy

Date: 08/12/2013

PM Review and Approval:

*Amy Friedlander*

Amy Friedlander

Date: 08/13/2013